

BUILDING EDUCATION FINANCE STATISTICS: Lessons learnt from the experiences of three Latin American countries



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Introduction

Financing is a key dimension in making solid policymaking decisions. It allows decisionmakers to assess the feasibility, efficiency and equity in the distribution of resources. This is possible through finance and expenditure data. This information is required to improve educational planning, as it helps to identify the combination of policies that have the strongest impact on strategic educational objectives, including access, completion and learning (UNESCO-UIS, 2011a).

Despite its importance, the development of information systems related to education financing in Latin American and Caribbean countries has evolved at a slow pace. In many cases, information has been limited to the data generated from national public budget documents. Clearly, resources allocated by the government play a central role in financing education systems. However, determining the real costs within the educational sector requires a more exhaustive analysis (Péano, 2011).

Over the last few years, the UNESCO Institute for Statistics (UIS) has developed a number of training activities focused on national capacity building in the production, national use and international reporting of education finance statistics. To this end, in 2011 the UIS – in collaboration with the Regional Bureau of Education for Latin America and the Caribbean (OREALC/UNESCO Santiago) – launched a technical assistance project designed for this region¹. The project was implemented in collaboration with the International Institute for Educational Planning (IIEP-Buenos Aires) which has extensive experience in the use of finance data in educational planning. Three countries of the region participated in the initial project: Ecuador, Guatemala and Nicaragua².

This report presents technical notes on the experiences of the participating countries in developing information systems to collect and manage education finance data, in addition to methods for international reporting through the UIS Education Survey. It is intended to serve as a tool to support national statisticians who are responsible for education finance data.

This report is organised as follows: Chapter 1 provides an overview of education financing in participating countries. Chapter 2 addresses the availability and characteristics of information sources about education financing in the sample group. Chapter 3 summarises the major issues faced by the participating countries in the production of finance data. Chapter 4 presents the main methodologies adopted by the countries. Chapter 5 outlines a set of recommendations for completing the UIS Education Survey. Lastly, Chapter 6 gives a synthesis of lessons learnt.

¹ The UIS works directly with national statisticians to improve the production and analysis of education finance indicators. UNESCO's priority region of sub-Saharan Africa was the first to benefit from a technical assistance project designed to strengthen education finance reporting in the region. With support from the World Bank, the project was implemented in nine countries.

² For a brief description of the project, its main objectives and approaches, please see Annex I.

1. Overview of education financing

This chapter covers the general trends in the institutional organization of education financing in the three participating countries. A detailed description by country can be found in Annex II.

An education system may receive resources from three different sources: the public sector, the private sector, and the international community. What sets each country apart is the degree of input from these sources, the various financial modalities in place, the beneficiaries of these resources, and the allocation mechanisms. This combination of factors can be referred to as the finance structure of an education system.

National structures must be understood in detail in order to systematise the production of education finance data. This chapter describes the main features of the frameworks in place in the three participating countries³.

1.1 The public sector

Public funding of education can stem from various levels of government. In the case of the sample countries, they all share a unitary state and strong centralised approach to public resource management⁴. A different role in resource allocation is played by the central, regional and local (or municipal) governments in the case studies.

In the sample countries, the central government assumes the main financial responsibility for education and education-related costs, including teacher salaries. Another common characteristic found among these countries is that regional governments do not directly intervene in the financing of educational institutions, while local governments provide some resources. In this sense, local governments play a more subsidiary role by providing their own resources for school maintenance and operational costs. Funding by this level of government may be partly due to its responsibility for school management, particularly at the primary and pre-primary education levels.

When two levels of government (e.g. the central and local levels) have authority over the finances and management of an education system, intergovernmental transfers are possible. In the case studies, there are no clear transfer strategies in place. While funds earmarked for

³ While the three sample countries share common characteristics in terms of the structure of education financing, any conclusions derived from this analysis must not be extrapolated to a regional model which, in turn, would require analysing a larger number of cases. Barro (1998) did such an analysis for a set of OECD countries and identified four education financing models, among which the “centralized continental Europe model” matches the context in the three Latin American case studies. This model is predicated on the dominating role of the central government in the areas of generating and allocating resources for education, directly paying for main school resources (including teachers), and leaving local governments to play a subsidiary role, basically limited to the maintenance and upkeep of school buildings and the provision of ancillary resources.

⁴ A centralised approach to public resource management is a common feature in the region. Martínez Vázquez (2010) conducted a study on local public finances in Latin America and concluded that, while over the last two decades spending has been increasingly decentralised to sub-national government levels (expenditure at these levels vs. central expenditure rose from 13% in 1985 to 19% in 2005), this trend has not been accompanied by an equivalent income revenue decentralisation. While sub-national governments still rely on intergovernmental transfers, those foreseen in the general participation schemes and other direct transfers provided by central governments may be subject to certain conditions.

education expenditure (particularly infrastructure) are occasionally transferred from central to local governments, these resources are not generally included in local budgets – which is problematic at the time of reporting⁵.

Given the important role played by the central government in financing education, the internal organization of this level in the three countries deserves an analysis. As expected, in all participating countries the Ministry of Education (MoE) assumes a leading role. It should be noted, however, that the MoE is not the only actor involved in the management of educational programmes or in their funding, since other ministries or public entities share these responsibilities.

National universities present an interesting case. Within the region, higher education institutions have been established as autonomous entities, i.e. they have their own governing bodies and the authority to manage public resources which are generally allocated directly to them through the national budget. In the participating countries, these transfers are made by the Ministry of Finance which is responsible for managing the central government's budget.⁶

Some educational programmes are managed and financed by organizations other than the MoE. For example, Early Childhood Care and Education (ECCE) programmes are commonly governed by social development agencies or organizations, and Technical and Vocational Education and Training (TVET) programmes are usually run by the Ministry of Labour or an agency specialised in training for work. Programmes given at teaching hospitals and military schools are commonly managed by health and defence ministries, respectively.

Figure 1 synthesises the general structure of public financing of education in the three study cases.

1.2 The private sector

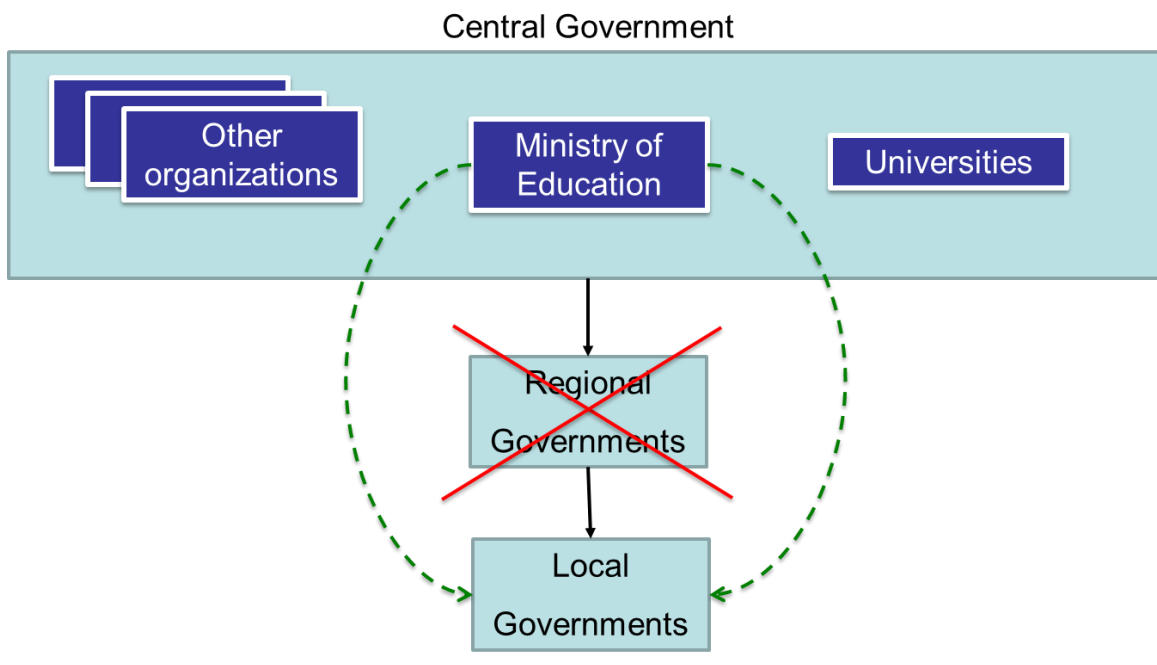
Within the private sector, households in Latin American countries play the most important role in contributing to the funding of education through tuition fees and the purchase of educational supplies⁷. In the participating countries, tuition fees to private schools account for the main household contribution. Additionally, families finance other related goods and services, such as school uniforms, textbooks or transport.

⁵ The term “intergovernmental transfer” refers to resources that form part of the regular budget of a specific government level (in this case, the central level) and are allocated to a different government level (i.e. local) so the latter may control the spending. On the other hand, and given that tax collection procedures are often highly centralised, many countries usually establish a redistribution system across different government levels. These systems tend to be regulated and are not considered equivalent to “intergovernmental transfers”.

⁶ Riveros (2008) identifies four financing methods for higher education in Latin American and Caribbean countries, with “direct public funding” representing the most important public source for national universities. This funding is provided to eligible institutions through the State's regular budget, following approval by the Parliament. A second source of public funding – still incipient in the region - is represented by temporary funds specifically designed to finance the objectives or achievements of universities or higher education institutions. The other two modalities involve the private sector.

⁷ According to UIS data, household contributions account for a significant share of funding from the private sector. During the 2002-2010 period, in the 12 Latin American and Caribbean countries reporting private expenditure data to the UIS, contributions made by families averaged 32% of the total expenditure on education (UNESCO-UIS, 2011c).

Figure 1. Institutional organization of public funding of education



In the case of public sector schools for pre-primary, primary and secondary education, families do not generally pay fees but make complementary contributions through purchasing educational materials/supplies or payments to Parents' Associations⁸.

Other private sector funders are private firms and civil society organizations, but their contributions are usually so fragmented that identifying – let alone quantifying – them becomes a very complex task. Some civil society organizations have time-honoured traditions in the field of education, for example, *Fe y Alegría* and *Don Bosco*.

1.3 The international sector

The international sector participates actively in the funding of education. Resource are usually channelled through the government or provided directly to educational institutions, with the former being the most prevalent among the countries analysed.

International funding is generally made to the central government through external credit operations or international aid initiatives. Generally, credit operations involve the participation of multilateral organizations, with the World Bank and Inter-American Development Bank representing two of the major actors in the region. International aid initiatives stem from other governments and institutions, such as the Spanish Agency for International Development Cooperation (AECID), Japan International Cooperation Agency (JICA) and the United Nations Children's Fund (UNICEF).

⁸ All three countries have made important strides towards providing free primary and secondary education through the elimination of tuition fees and the provision of financial support to schools for the purpose of defraying operational costs.

2. Sources of data

The analysis of education finance data can be broken down according to the source of funding: public, private or international. Data availability and the level of development of information systems vary significantly, depending on the source of the resources. Generally, information systems for public funding are the most developed.

The main source of analysis for public funding is the education sector's budget. Budgets are planning tools used by governments to estimate the resources required each fiscal year and decide on their allocation to different sectors and programmes. Subsequently, during the execution stage, budgets become tools that facilitate the reporting and follow-up of financial movements.

The three participating countries develop and implement an annual budget, at least at the national level, with an automated financial administration system.⁹ This system is coordinated by the Ministry of Finance, while various budget execution units, such as the MoE, participate in its management. In practice, each executing unit has access only to information circumscribed to its own area of responsibility. This explains why the MoE does not have access to information on total expenditure on education.

In general, ministries of education have an educational planning unit responsible, among other things, for coordinating the education statistics system.¹⁰ According to the capacity building initiative, finance data must be an integral part of the sector's general statistics system, which is why the planning area is considered a focal point.

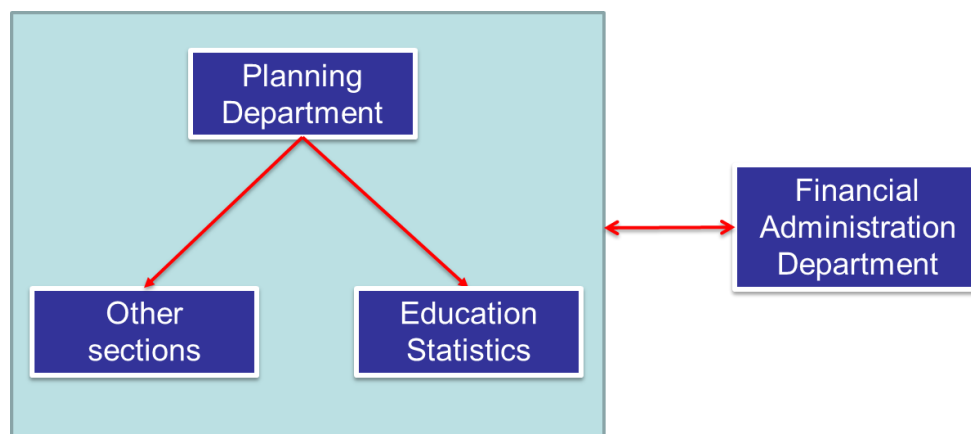
However, the responsibility for managing the MoE's budget usually falls within a financial administration unit. This office accesses the overall financial administration system and also has the technical knowledge needed to interpret budget-related data. **Figure 2** presents the internal structure of the MoE in schematic form.

In order to generate education finance data within the MoE's planning departments, technical collaboration is required: i) within the MoE (between the planning and financial administration units); and ii) between the MoE and the Ministry of Finance. The latter ministry generally has a budget section, often with specialists of the various sectors of the government. Education specialists are key actors in the development of education finance information systems.

⁹ Over the last two decades, the region has made important efforts to promote widespread budget practices. In general, countries have adopted the use of annual budgets and followed the different steps of the budget cycle: elaboration, approval, implementation and assessment. The use of budgets and automated tools that facilitate administration and follow-up has enabled the production of data on public funding of education.

¹⁰ This translates into the existence of an education statistics office as well as other sections that, even if they are not primary data producers, play an important role in the analysis of education finance data as they are responsible for demand and resource projections and, in some cases, participate actively in the processes of budget planning, assessment and follow-up.

Figure 2. Institutional structure of the Ministry of Education for analysing education finance data



At the central level, budget coverage tends to be exhaustive; that is, it includes all public sector resources and is periodically updated. This is not always the case at local levels, where budgeting practices may vary.¹¹ Often data on education expenditure provided by local governments to the central level are incomplete or unreliable. Furthermore, none of the participating countries have a sound mechanism in place to accurately estimate this expenditure.

For private funding, it is difficult to produce an accurate account of resources due to the variability of its sources. As mentioned earlier, households, private firms and civil society organizations are the main private funders, but these contributions can only be quantified through estimates. Of these sources, the household category has the most data available due to household surveys typically administered by the National Statistical Office. While the objectives of these surveys can vary, often data on expenditure or consumption of educational goods or services are gathered. **Table 1** provides a list of household surveys available in each of the participating countries.

Contributions from international sources to governments are clearly identified in public budgets. Consequently, both the amount of available resources and their allocation are duly reported. This is not the case when contributions are transferred directly from these sources to educational institutions. Once again, different organizations are involved and often there is no single entity responsible for collecting and consolidating these data.

In summary, there are more data available for the public sector than for the other sectors. In the participating countries, this is especially true for the budgets of the central governments. For the private sector, some tools are available to better estimate household expenditure on education. Lastly, contributions made by international sources and executed through the central governments are reported in public budgets.

¹¹ In most Latin American countries, budgeting at the local level is still based on a traditional organization of budget lines and an intensive use of the incremental approach. Thus, budgets are developed on the basis of the previous year, rather than through planning and forecasting. Programme-based budgeting at this level has received little attention to date (Martínez Vázquez, 2010).

Table 1. Datasets for estimating household expenditure on education (survey and most recent year available)

Nicaragua	Guatemala	Ecuador
- Household Income and Expenditure Survey (2008/2009)	- Life Satisfaction Survey ENCOVI (2006 and 2011)	- Urban and Rural Household Income and Expenditure Survey, ENIGHUR (2004/2005 and 2011/2012)
- Quality of Life Survey (2009)	- Family Income and Expenditure Survey (2009/2010)	- Life Satisfaction Survey (2005/2006)
- Annual survey of private educational institutions in the framework of the National Accounts System (Central Bank)		- Socio-economic Level Survey (2011, five major cities)

3. Main challenges in data processing

In the previous chapters, the difficulties in obtaining education finance data are outlined. In general, these issues stem from institutional structures, the number of funders involved, and the lack of some information sources for financing education. In contrast, this chapter addresses the issues identified during the processing of existing data.¹²

In the first year of the project's implementation, participating countries focused their efforts on the automation and analysis of public funding data. These data were first used for automating the completion of Questionnaire B (education finance statistics) of the UIS Education Survey.¹³ During this process, the following technical challenges were identified.

Interpreting budget information

Technical capacity building is needed for educational planners and statisticians in reviewing budget information. Historically, educational planners in the participating countries have focused on analysis of the supply and demand of physical resources, not financial matters (Péano, 2011).

Public budgets have a specific structure, terminology and coding, which can be difficult to interpret by a non-expert. Thus, individuals must become acquainted with the features that are inherent to budgets in order to work efficiently with the information. In this context, technical support from the MoE's financial administration areas is essential.

¹² This chapter addresses the most frequent issues faced by countries during the processing of education finance data. A detailed account of the technical difficulties encountered by each country can be found in Annex III.

¹³ UIS education questionnaires are sent to UNESCO Member States on an annual basis. The collection covers data on educational programmes, access, participation, progression, completion, internal efficiency, and human and financial resources. In particular, Questionnaire B collects data on education finance and expenditure.

Expenditure allocations by education levels

The information contained in public budgets is not necessarily organized in a way that education finance analysts would expect. Normally, these analyses classify expenditure by education levels. This classification is also used in the UIS questionnaires, although the education levels are mapped to the internationally-recognised ISCED structure.¹⁴

The participating countries have a programme-based budget structure, i.e. all resources are allocated to budget programmes.¹⁵ Within the education budget, it is not unusual to find that some budget programmes coincide with education levels or programmes (for example, primary or secondary education, special education, etc.). In these cases, expenditure allocation by education level is quite straightforward. Where other budget programmes do not specify a particular level, expenditures must be allocated. Finally, in a budget programme for a specific level, it is possible to find expenditures corresponding to a different level.

Division between general administration expenditure and school-related expenditure

Every budget assigns a portion of its resources to the administration of the education system, for example, for operational costs and salaries of MoE staff and other administrative units. The remainder of the resources is allocated to the system through school-based expenditure, transfers, etc. This is the division of expenditure normally used in education finance analyses. UIS Questionnaire B, however, makes a distinction between government expenditure allocated to educational institutions, transfers to the private sector, and expenditure allocated to institutions other than educational institutions. General administration expenditure is included in the last group.

In public budgets, particularly the MoE's budget, usually "Central Administration" or "Central Projects" are earmarked for these administrative costs. However, expenditures sometimes meant to be allocated to educational institutions are also included in these budget programme categories. This is due to a "general expenditures" category that is difficult to disaggregate by education level. As a result, the expenditures are reported in budget programmes meant to fall under central expenditure.

Breakdown of expenditure items in public universities

As described earlier, public universities receive resources directly through transfers made by the Ministry of Finance in the three case studies. While these transfers can be easily identified in public budgets, information on their breakdown is often missing. In other words, the first budget movement is reported under the item "transfers", but after universities receive these resources,

¹⁴ The International Standard Classification of Education (ISCED) is a framework that allows for the comparison of education statistics and indicators across countries on the basis of uniform and internationally-agreed concepts and definitions. Using the classification, national education programmes can be mapped to ISCED levels, making international comparability possible. The ISCED 1997 version is currently being used for international data reporting, although a new ISCED 2011 has been recently approved by the UNESCO General Conference (to be implemented in the near future). For detailed information on the 1997 classification and its 2011 revision, please visit: <http://www.uis.unesco.org/Education/Pages/international-standard-classification-of-education.aspx>

¹⁵ Consequently, other divisions – such as sub-programmes, projects and activities – may be included within each budget programme. Expenditures are disaggregated by items, for example, personnel expenditure, services, transfers, etc.

they become a different type of expenditure: salaries, goods and services, etc. This second movement of resources is not reported in public budgets.

This is why detailed information on university expenditures is difficult to obtain, at least from the information collated in public budgets. A division between current and capital expenditures – a commonly used budget classification – is the only possible breakdown. Therefore, using reports produced by the universities themselves or the elaboration of estimates is required.

Analysis of education expenditure of entities other than the MoE

One of the classification categories used in public budgets is “purpose”, which records the sector receiving the resources. Based on this classification, it is possible to determine the expenditure allocated to the education sector.¹⁶ Once these expenditures are identified, determining which organizations – other than the MoEs – are contributing to the funding of education may be possible.

However, when the MoE does not have information on educational programmes that are funded by other agencies, it is difficult to allocate these expenditures categories, such as education level, type of expenditure, etc. This task requires contacting the government offices responsible for these programmes and enquiring about their features.

The case of technical and vocational education and training

As a general rule, technical and vocational education and training is considered multisectoral; in other words, in the absence of a unified governance system, its administration and regulation is divided among different entities. In the public sector, within the formal and graded structure of the education system, the MoE is usually responsible for technical programmes, but then other entities, such as the Ministry of Labour or the National Training Institute, manage their own educational programmes, many of which may fall under the category of “non-formal” education, depending on the definition adopted by each country.

This institutional diversity makes the processing of education sector statistics and finance data rather difficult. In general, in the budgets of institutions other than the MoE, resources allocated to education or training are clearly identified. However, reporting is difficult when: i) MoE staff are not notified about educational programmes funded by other organizations; and ii) some of these programmes fall outside the scope of the UIS Education Survey, which collects data on formal education programmes only.

The UIS Education Survey does, however, include technical programmes which fall under formal education. Non-formal education programmes – even if they fall within the scope of ISCED – are not included in the UIS data collection (UNESCO-UIS, 2011c).¹⁷

¹⁶ It is possible that the education expenditure reported under certain items of the public budget will not match the international criteria used in reporting data to the UIS. In this case, the necessary adjustments should be made. Such differences may also involve the definitions adopted by the MoE, given that the designation of “purpose” is made by either the Public Finance Ministry or the agency responsible for the expenditure.

¹⁷ The UIS Education Survey includes a National Educational Programmes Questionnaire designed to map current national programmes into ISCED levels. It has a wider coverage than the other survey questionnaires (A, B and C) which focus on formal education.

Conditional cash transfer programmes

Conditional cash transfer programmes (CCTs) are defined as programmes that provide monetary and non-monetary incentives to poor households, provided that they meet certain criteria, such as enrolling children into public schools and committing to regular health controls. In recent years, CCTs have proliferated in the region.¹⁸

CCT programmes vary from country to country but have political importance and large budgets. Given their multisectoral nature, no common criterion exists for assigning these programmes to a specific line in the public budget.¹⁹ These poses a challenge for processing, since countries must first determine if the expenditure is relevant to the funding of education and, if so, decide whether to include the entire programme in the budget or just the amount corresponding to education.

Public subsidies to private schools

In the three participating countries, private educational institutions receive government subsidies through different mechanisms. Since these resources are public, they form part of the government's budget. This can present further challenges to data processing.

These subsidies are usually dispersed through transfers, which can result in issues for processing (as mentioned earlier in connection with universities): the allocated resources are easily identified initially, but their subsequent use cannot be discerned from the public budget. When resources have a pre-defined designation, for example salaries, reporting is straightforward.

The UIS questionnaire classifies educational institutions as government-dependent or independent.²⁰ Reporting public resources for private education based on this breakdown can be challenging since these categories are not always well captured by the MoE's information system or cannot be consolidated into the subsidy information.

¹⁸ According to ECLAC's non-contributory social protection programme database for Latin America and the Caribbean, CCTs can be found in 18 countries of the region and provide benefits to approximately 25 million people, or 19% of the total population. Benefits are mainly monetary, but some of these programmes also provide non-monetary benefits, such as food or other basic needs. CCT programmes aspire not only to reduce poverty but also to promote human capacity building, a key asset for sustainable development and social growth (ECLAC, 2011).

¹⁹ Reimers et al. (2006) have analysed a number of CCTs in different regions in the world, including in six Latin American countries, in order to assess their real impact on education. Their findings reveal that in many of the cases the cost of these programmes has been assigned to education and represents more than 8% of the public spending for this sector. Since 80% to 90% of this cost is usually absorbed by salaries, CCTs cover an important portion of governments' "discretionary" education expenditure.

²⁰ A government-dependent private institution is one that receives at least one-half of its core funding from government agencies. Institutions should also be classified as government-dependent if their teaching personnel are paid by a government agency. The institutions that receive less than one-half of their core funding from government agencies are considered "private independent schools".

The issues outlined above are linked with the analysis of national public budgets. Within the public sector, it can also be difficult to obtain information on education expenditure from local governments – although this does not have much impact in the participating countries due to its low participation in total expenditure. Nevertheless, in Questionnaire B alternative information sources should be identified or estimates provided for these expenditures.

At the initial stage of the project, an in-depth analysis of data on private sources of funding is not done, and thus, a list of methodological issues cannot be provided. Nevertheless, some general challenges in estimating education expenditure by households are common when processing household surveys

First, these surveys were not designed to seek data on education financing only, thus it is common that data are not disaggregated to the level required. Second, the possibility to make estimations by various levels of data (i.e. education level) depend on the design of the survey. Lastly, while international reporting of education statistics occurs annually, household surveys are generally conducted at longer intervals.

4. Methodology

In the first year of project implementation, the three participating countries gave priority to the processing of data in public budgets. In this context, national teams encountered challenges described above and had to implement methodologies that would automate data processing while retaining the expected categories and formats. Some examples are given below. These methodologies can be improved over time and with practice.

Distribution of expenditure by education levels

When a budget line does not fully reflect an education level (or an ISCED level in the case of Questionnaire B), the expenditure must be divided. It is recommended to use the weighting variable which is the most related to the type of expenditure being allocated. For example, if the expenditure is associated with teachers, the share of teachers at each education level in relation to the total number of teachers would represent a good approximation.²¹ On the other hand, if the expenditure is related to textbook distribution, then the share of enrolment at each level in relation to total enrolment could be used.

In participating countries, the general method used for estimating the distribution of expenditure by education level was weighting the share of enrolment at each level as a proportion of total enrolment, rather than type of expenditure. In some cases, this weighting does not reflect the total for the educational system but the sum of certain education levels.

Allocation of public expenditure to universities

In many cases, a detailed account of public spending by universities was not available. The only entry obtained was limited to transfers received from the Ministry of Finance. These were generally divided into transfers for current and capital expenditures.

²¹ When using teachers as a variable for estimations, it should be based on the number of full-time equivalent teachers, not on headcounts.

Under these circumstances, the method used for processing these data was the following:

- i) In Table 1 of UIS Questionnaire B, transfers were identified as direct expenditure for public educational institutions (C1) at ISCED levels 5 and 6. This implies that code “x” (data included in another cell/category) should be entered in cells ISCED 5B and ISCED 5A+6.
- ii) In Table 2, current expenditure transfers were assigned to row X14 (total current expenditures), again in relation to ISCED levels 5 and 6. This means that in the rest of the rows under columns 5 and 6, as well as in the cells of columns ISCED 5B and ISCED 5A+6, a code “x” must be entered. Capital expenditure transfers were assigned to row X15 (total capital expenditures).²²

Public subsidies to private educational institutions

The three categories of educational institutions used in UIS Questionnaire B can be found in all participating countries.²³ Additionally, the total amount of subsidies and list of educational institutions that were and were not subsidised can be clearly identified. However, data on the amount of the subsidy to each educational institution was missing.

A single category (government-dependent private institutions) was used in UIS Questionnaire B to report public subsidies to private institutions. This method was used because national teams were familiar with the usual amount of subsidies for this type of educational institutions, even though accurate data were not available.²⁴

Conditional cash transfer (CCT) programmes

While in two out of the three participating countries CCT programmes are in place, the method used for reporting has been different in each case. A review of these programmes is important, given the size of their budget and high visibility in the region.

In the first country case, CCTs are excluded from education expenditure. This decision was prompted by the relatively ambiguous education-related conditions attached to CCT programmes and the lack of a mechanism to ensure their compliance prior to payment. For these reasons, national teams regard the current version of this programme as a policy for subsidising poverty without conditions.

In the second country case, health and education-related conditions are significantly clearer and thus are reported under education expenditure. The challenge lies in defining the percentage of resources that should be allocated to the education sector. CCT programmes were created a year before the data systematisation initiative, at which time ministries (including the MoE) transferred resources to the programme. Since in the second year of implementation there were no significant changes to the overall budget, the amount of the previous year’s transfer could be

²² It must be noted that Table 2.X includes expenditure in public institutions from all sources (not only from public sources). So, public expenditure on universities must be complemented with data on expenditure from other sources.

²³ These categories are: public institutions, government-dependent private institutions, and independent private institutions.

²⁴ In one of the participating countries, a division between expenditures for public and private educational institutions could not be established, since no such division was provided in the budget information. In this instance, all expenditure related to educational institutions were entered in row C5.

used as an estimate of the portion corresponding to education for the target year. This is a temporary solution that cannot be maintained as the programme budget increases and deviates from the original values.

5. Recommendations for completing Questionnaire B

International reporting of education finance data is one of the desired outcomes of the initiative. Thus, this section presents recommendations for completing Questionnaire B of the UIS Education Survey. These guidelines are based on questions from participating countries and common issues which were identified during the implementation phase.²⁵

Use of codes

When completing UIS questionnaires, no cell should be left blank; in other words, all cells must be filled with either data or codes (UNESCO-UIS, 2011b). Codes are used to provide more information on missing data:

- x: Data included in another cell/category
- m: Data not available
- a: Category not applicable/does not exist
- n: Quantity nil or negligible

Double-counting of transfers

Some rows in Table 1 of UIS Questionnaire B are reserved for transfers. These transfers may involve government levels (intergovernmental transfers), the private sector (originating at the government level or between private sector actors) or international funding.

A general feature of transfers is that they are not a final expenditure. Rather, they represent a movement of resources which will subsequently be allocated to educational expenditures by the beneficiaries. This explains why these resources will be included twice in Table 1, as they represent an expenditure incurred both by the originator and by the recipient. For example, many governments award scholarships to students (transfers to the private sector) and subsequently families use this money to pay school enrolment fees (direct expenditure on educational institutions). Another example: an external cooperation agency provides resources to a central government (transfers from international sources to the central government) which, in turn, uses these resources for school infrastructure (direct expenditure on educational institutions).

Information consistency checks

Once the automation and processing of information has been completed and UIS Questionnaire B filled out, a set of checks should be run in order to detect possible errors in the processing or reporting of data.

²⁵ General instructions for completing this questionnaire can be found on the UIS website at: <http://www.uis.unesco.org/UISQuestionnaires/Pages/default.aspx>

The first item to check is the expenditure distribution by education level. Once the questionnaire has been completed, the amount of resources allocated to each education level (ISCED level) and their share in the total can be analysed. Since unit costs by level may vary, a general comparison between the distribution of resources and the distribution of other system variables, such as enrolment and teachers, is advisable. Through this comparison, inconsistencies in data can be identified.

Another check concerns the share of expenditure in the total amount of resources not allocated by level. While allocating some resources to a specific education level can be complicated (for example, certain central administration expenditures), the relative share of this type of expenditure should be minimal, that is, less than 5% of the total. Higher figures indicate an expenditure that cannot be allocated to education levels and is currently being reported under a general item or category.

A similar situation can be found in central administration expenditures that vary across countries – and even within countries – depending on the education level or programme. Nonetheless, these expenditures generally represent a small proportion of the total budget. This information must be analysed to avoid reporting educational institution expenditures under central expenditures.

There are no rules governing the distribution of current and capital expenditures. However, since capital expenditure is quite consistent year after year, it is helpful to analyse its historical values. Because capital investments are generally related to infrastructure or equipment expenditure, sudden shifts in investment levels could be easily traced to changes in educational policies.

In the electronic version of UIS Questionnaire B, there is a consistency check incorporated into Tables 1 and 2. While Table 1 records the total amount of resources allocated to education by different sources, Table 2 requires reporting only direct expenditure for educational institutions. This, applied to box N (combined sources) of Table 1, means that Table 2 does not take into account government expenditure that is not earmarked for educational institutions (G15) or household contributions made to non-educational institutions (H18). Therefore, the totals reported in Table 2: X20, Y20 and Z20 must match the corresponding totals in Table 1: N1, N2 and N3.

Table 3: Total government expenditure

Total government expenditure for all sectors is reported in Table 3 of Questionnaire B. This information is required to calculate indicators that measure public expenditure on education in relation to total government expenditure. While this is a relatively straightforward table, some challenges may be encountered.

Total government expenditure in this table should include expenditure on education, i.e. it represents the government's overall expenses. These data are available in all national statistical systems and may be published on websites or in publications issued by entities such as ministries of finance, central banks or national statistical offices.

Table 3 requests expenditure data for all government levels, not only at the central level. If this information is included as a consolidated total of public spending, then a breakdown is not possible. In this case, values should be reported in row 4, under Total, and rows 1 through 3 should be filled with a code "x" (data included in another cell/category).

Consistency across Questionnaires A, B and C:

While UIS Questionnaire B collects finance data on education systems, its scope should remain within the educational programmes included in the UIS Education Survey in general. In other words, Questionnaire B aims to provide financial information about the statistics reported in Questionnaires A and C.

It is important to keep in mind the boundaries defined by the UIS Education Survey. This means that some public expenditure data covering educational programmes that are outside of the scope of the survey, such as adult literacy programmes, must be excluded from the data automation process, regardless of the fact that these resources have been defined in the budgets as educational spending or form part of the MoE's budget.

6. Lessons learnt

Although countries are still evaluating the initial results of this project, some common lessons learnt through the implementation stage can be highlighted.

Institutional conditions

Through implementation, basic institutional conditions were defined in order to establish an automated mechanism for data processing. As such, a planning unit with access to all resources required to lead the project is imperative. These resources include technical personnel, time allocation, and political support to collect and disseminate complete data.

The exercise also revealed the need to forge ties with data-producing institutions. Within the MoE, contacts should be established with the planning and finance administration areas. These contacts should be extended to the Ministry of Finance. Support from these entities is vital for data availability and technical assistance in interpreting and processing data. Furthermore, institutional ties will make the data production cycle sustainable over time.

Stability of the teams responsible for data processing is essential. In Latin America, changes to public authorities are frequently accompanied by sweeping renewals of hierarchical and technical staff at various levels. Furthermore, planning units are highly susceptible to change given their strategic role. The continuous turnover of personnel has a negative impact on project sustainability, since each replacement translates into a loss of operating capacity.

Training needs

During the implementation process, some training needs were identified. Training would strengthen the technical skills of the national teams which are processing data for international reporting.

Public budgets are firmly entrenched in the State's bureaucracy and use their own terminology and procedures, which can be hard to decipher to layperson. In addition, specific training is needed to operate the computer systems used by governments to process their financial information. As such, developing skills for interpreting budgetary data and handling financial administration systems is recommended.

Private sector data are often gathered through household surveys. Specific training should be provided to MoE staff for making estimates based on this data source.

During the implementation phase, it became evident that there were issues in interpreting UIS Questionnaire B – particularly related to its structure and dimensions. National teams seemed to lack experience in the planning and processing of this type of data. Training should be provided on the structure and conceptual framework of Questionnaire B.

Organization of the capacity building initiative

The overall organization of the capacity building project and its intervention methods are described in Annex I. After implementation in three participating countries, some useful lessons can be learnt.

The distribution of tasks between the UIS and IIEP received a positive evaluation. While representatives of the former were mainly engaged in the production of data, the consultant for the latter focused on using this information for educational planning. Thus, countries received interventions specific to their circumstances.

Much support was given by the Regional Bureau of Education for Latin America and the Caribbean (OREALC/UNESCO Santiago) to the different stages of the project. The Planning, Management, Monitoring and Evaluation Section, and in particular the Regional Information System (SIRI), outlined the objectives for implementing this project in the region.

The invitation to participate in workshops was extended to three representatives of each country. This, in addition to scheduled field visits, enabled a number of members of each national team to participate. Working with many local staff members is strategic when the MoE faces such high turnover rates.

The kick-off workshop served as a launching pad for planning, in addition to being the venue for training of technical teams. In order to maximise the impact of field visits, it is helpful to send budgetary information ahead of time to the project coordinators so that training of national teams can focus on existing examples. It remains to be evaluated whether conducting a closing workshop would be more beneficial than a second country visit.

One of the greatest difficulties faced was the follow-up to scheduled activities and meeting deadlines. The MoE's planning and statistical teams have busy agendas and at times the capacity building project may fall in priority.

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Annex I

Project description

Due to a lack of reliable data on education financing in countries in Latin America and the Caribbean, the project, *Strengthening National Capacities in the Production and Analysis of Education Finance Statistics*, was developed by UNESCO in order to provide assistance to countries.

The overall objective is to give support to ministries of education in the development and implementation of a sustainable mechanism to regularly produce education finance data and indicators, in addition to promoting the use of these data in educational planning. Within this context, some specific objectives can be identified:

- Obtain disaggregated data on financial resources allocated to education;
- Train national teams on current standards governing the production of internationally comparable data on education financing; and
- Make available national reports on sectoral financing, expenditure distribution and funding sources.

The project is a joint initiative by the UNESCO Institute for Statistics (UIS) and the Regional Bureau of Education for Latin America and the Caribbean (OREALC/UNESCO Santiago), with the collaboration of the International Institute for Educational Planning (IIEP- Buenos Aires).²⁶

Participating countries were required to create national teams, led by the planning units of national ministries of education, comprising representatives from agencies responsible for the production or management of education finance data.

The project was launched in 2011 and in three Latin American countries: Ecuador, Guatemala and Nicaragua. A second stage of the project was scheduled for 2012 to strengthen sustainability and reinforce particular aspects that required further work.

The main objective was to create a formal mechanism to obtain, on a periodic basis, analytical and statistical data relevant to educational planning and follow-up, while meeting UIS' international data reporting requirements. Given that this is a long-term undertaking, two results were expected after the implementation stage: a national report on the state of education financing and an international data report for 2010 data in the framework of the UIS Education Survey²⁷.

To this end, the UNESCO team provided technical assistance within each country and provided a forum for all three national teams to exchange ideas. The working methods were defined over the two workshops and technical visits to each country.

The UNESCO team focused on developing a mechanism to ensure the production of education finance data according to technically-accepted standards through skill-building activities geared towards data analysis and its use in educational planning.

²⁶ UNESCO cluster and national offices in participating countries also collaborated in specific activities.

²⁷ Data are reported to the UIS on an annual basis through Questionnaire B of the UIS Education Survey. For more details, please refer to footnote 14.

Annex II

Structure of education financing in participating countries

Countries		Nicaragua	Guatemala	Ecuador
1. Public expenditure				
1.1. Government Levels				
	Central	Participates in educational spending.	Participates in educational spending.	Participates in educational spending.
	Regional	Does not participate in educational spending.	Does not participate in educational spending.	Does not participate in educational spending.
	Local	Participates in educational spending.	Participates in educational spending.	Participates in educational spending. Municipal schools (ISCED 0-3) are funded at this level.
1.2. Central Level				
	Institutional venue of universities	Universities falling outside the scope of the MoE receive direct transfers from the Ministry of Finance.	There is only one public university (Universidad de San Carlos) not under the authority of the MoE which receives direct transfers from the Ministry of Finance.	Universities falling outside the scope of the MoE receive direct transfers from the Ministry of Finance.
	Educational spending not assumed by the MoE	INATEC (up to 2010, was part of the Ministry of Labour), Scholarships (included in the Presidential budget) and "Allocations and Subsidies" (for example, universities).	Several ministries are involved: Ministerio de Comunicaciones, Infraestructura y Vivienda; Ministerio de Agricultura, Ganadería y Alimentación; Ministerio de Energía y Minas; Ministerio de Gobernación; Ministerio de Defensa Nacional; Ministerio de Salud Pública y Asistencia Social; transfers included in "State obligations under the Treasury Department"; and "Secretariats and other Executive Power administrative agencies"; Defensa Nacional.	Polytechnic universities and institutes; Ministerio de Inclusión Económica y Social (pre-primary level programmes); Ministerio de Defensa (military schools); SECAP (vocational programmes); SENESCYT (scholarships); and the Instituto Ecuatoriano de Crédito Educativo (scholarships).
	Intergovernmental transfers	While funds earmarked for school infrastructure expenditure (maintenance) are transferred to the municipalities, these transfers are not included in municipal budgets.	Under the law, there is only one system of transfers to municipal governments and they are not targeted to a specific purpose ("participation system"). However, there are transfers to municipal level mediated by third-party organizations that generally have a specific purpose, such as school infrastructure.	No transfers for educational purposes are currently made to provincial or municipal governments. The Educational Act of 2011 has opened a debate on the advisability of making direct transfers to the municipalities for school infrastructure expenditures.
1.3. Regional Level				
	Is information on educational spending available at this level?	n/a.	n/a.	n/a.
1.4. Local Level				
	Is information on educational spending available at this level?	No. The range of this source is yet to be determined.	No. Currently, the Ministry of Finance consolidates all municipal government spending; however, it does not incorporate a breakdown by purpose and function. Estimations on the share destined to the education sector could be made on the basis of this information.	No. The Ministry of Finance does not consolidate data from public spending at all levels of government.

Countries		Nicaragua	Guatemala	Ecuador
2. Institutional organization of the MoE				
2.1. Organization chart				
	Where is the planning office located?	The Dirección General de Planificación is under the authority of the Educational Planning and Investment Secretariat (Vice-Ministry status).	The Dirección de Planificación Educativa is under the direct authority of the Minister (Despacho Superior). In actual practice, the Vicedespacho Administrativo has influence over this area since the Subdirección de Infraestructura operates within the DIPLAN (in the process of separating).	The Coordinación General de Planificación is under the authority of the Vice-Ministry of Education (the only State Secretariat having this status).
	Where is the statistics office based?	The Dirección de Estadísticas Educativas is under the authority of the Dirección General de Planificación.	The Subdirección de Análisis Estadístico e Información Educativa is under the authority of the Dirección de Planificación Educativa.	The Dirección de Información y Evaluación is under the authority of the Coordinación General de Planificación.
	Where is the financial administration office based?	The Dirección General Administrativa Financiera is under the authority of the Secretaría de Administración Financiera .	The Dirección de Administración Financiera is under the authority of the Vicedespacho Administrativo Financiera .	The Dirección Nacional Administrativa and the Dirección Nacional Financiera are under the authority of the Coordinación General Administrativa y Financiera .
	Are there any other relevant areas?	The Dirección de Proyectos and the Dirección de Seguimiento y Evaluación Institucional operate under the aegis of the Dirección General de Planificación.	The Dirección de Planeamiento Educativo includes the Subdirección de Planificación Institucional and the Subdirección de Demandas Educativas .	The Coordinación General de Planificación includes the Dirección de Planificación Técnica .
3. Ministry of Finance				
	3.1 Pertinent Areas	The following two Ministry of Finance areas employ sector specialists in education: the Dirección de Presupuesto and the Dirección de Presupuesto de Mediano Plazo .	Dirección Técnica del Presupuesto .	Subdirección de Seguimiento y Evaluación Presupuestaria .
4. Public budget and education				
4.1. Regulations				
	Is there special legislation in place or are there objectives set for the education sector?	Nicaragua's Constitution establishes that the universities receive 6% of the National Public Administration's general budget.	The General Education Act establishes that at least 35% of the State general budget's current revenues must be earmarked for education. On the other hand, Peace Agreements include clauses on education investments, although no specific objectives are provided. Contributions made to cooperative schools are also regulated by legislation that guarantees their funding following their certification.	Ecuador's Constitution assigns 6% of the country's GDP to education. The Education Act of March 2011 also embodies this objective. Additionally, the Act establishes clauses for the protection of public investments in education.
	4.2. Extra budgetary contributions	The INATEC receives by way of contribution a payroll tax (2%).	The INTECAP along with receiving budget contributions also receives a payroll tax directly from business firms.	Public universities and the SECAP are fee-paying institutions. This information must be provided to the Ministry of Finance for budget execution. These resources, and others generated by the sale of services are called "self-management resources".
		The administration of the Bolivarian Alternative for the Americas (ALBA) provides a salary supplement for teachers.		
4.3. Budget structure				
	Is this a programme-based budget?	Yes.	Yes.	Yes.

Countries		Nicaragua	Guatemala	Ecuador
	What level of breakdown was discussed during the country visit?	Two breakdown levels: Programmes and Activities.	Two breakdown levels: Programmes and Activities.	Three breakdown levels: Programmes, Investment Projects and Activities. The second category is used to identify strategic programmes. The other two categories are labelled 00 (no assigned project).
	What expenditure classification by object was discussed during the country visit?	Three groups: Personal Services, Non-Personal Services, Materials and Inputs (all categories disaggregated).	Groups: Personal Services; Non-Personal Services; Materials and Inputs; Current Transfers; Capital Transfers; Property, Plant and Equipment; Intangible assets; Global Allocations (all categories disaggregated).	Classification by Expenditure Groups and Items.
4.4 Budget Execution Updating		Permanent through the SIGFA (Sistema Integrado de Gestión Administrativa y Financiera).	Permanent through the SICON (Sistema de Contabilidad Integrada) and the SIAF (Sistema Integrado de Administración Financiera).	Permanent through the SIGEF (Sistema Integrado de Gestión Financiera).
5. Educational Institutions				
5.1. Type of institution				
	Do public schools operate in the country?	Yes.	Yes.	Yes. Central level educational institutions known as "fiscales" as well as municipal schools operate in the country. In the latter case, part of the school-based staff payroll is funded directly by the Central Government.
	Do private subsidised educational institutions operate in the country?	Yes.	Yes. The so called cooperative educational institutions, and schools run by social organizations, such as Fe y Alegría or Don Bosco. Funding for these institutions is guaranteed by law.	Yes. The so called "fiscomisionales" education institutions which are normally run by religious groups. They receive contributions for teachers' salaries and current expenditures. The share of subsidy received may vary. At the tertiary level, co-financed universities can be found directly by the Central Government.
	Do private independent schools operate in the country?	Yes.	Yes. They do not receive government support.	Yes. For the purposes of Questionnaire B, this category includes "fiscomisionales" educational institutions receiving less than 50% of their core funding from the State.
6. Private expenditure				
6.1. Information sources				
	Are official statistics on private spending officially disseminated?	No.	No.	No.
	Are there sources of household expenditure available?	The Central Bank conducts annual surveys of private schools in the framework of the national accounts system, as well as the Household Income and Expenditure Survey (most recently conducted in 2008/2009). The Instituto Nacional de Información de Desarrollo (INIDE) administers the Life Satisfaction Survey (most recently in 2009).	The Instituto Nacional de Estadística (INE) conducts two household expenditure surveys: the National Survey of Quality of Life (ENCOVI) - most recent database available corresponds to 2006 and a new survey is currently being conducted - and the Family Income and Expenditure Survey, last administered in the 2009/2010 period.	The Instituto Nacional de Estadística y Censos (INEC) conducts three surveys: the Urban and Rural Household Income and Expenditure Survey (ENIGHUR), first administered in 2004/2005 and currently being administered (2011/2012); the Life Satisfaction Survey administered in 2005/2006; and the Socioeconomic Level Survey administered in 2011 (in five major cities). Questions on education expenditure are also asked in the Employment Survey.
	Are there private organizations in place that play an important role in the educational system?	No.	Yes. The Fe y Alegría and Don Bosco schools.	Yes. The Fe y Alegría schools among others.

Annex III

Common technical difficulties in processing education finance data, by country

Countries	Nicaragua	Guatemala	Ecuador
General			
	Disaggregating budget items by education level.		
	Breaking down transfers to universities by type of expenditure.		
	Breaking down transfers to private educational institutions by type of expenditure (in Ecuador's case, these transfers are more readily identifiable because they are organized by type: salaries, goods, etc.).		
	Quantifying expenditure on education made by municipal governments.		
Specific			
	Some activities included in the budget programmes do not belong in these programmes (e.g. Central Activities or Primary Education Programme).	Allocating part of the conditional cash transfer expenditure to education budget (<i>Mi Familia Progresá</i>).	Within the MoE, expenditure execution has been decentralised to executing units: <i>Direcciones Provinciales</i> (basic education) and educational institutions (secondary schools, although some primary schools also operate under their patronage for purposes of resource execution). This implies reporting issues in terms of their execution; thus affecting data quality.
	Breaking down expenditure on teachers' salaries (vs. expenditure on students and other) and support personnel.	Reporting transfers to municipalities: made by the Ministry through third parties.	Some specific cases were identified during data processing in relation to teachers' salaries and their distribution by education levels: teachers that work in more than one education level; single-teacher schools; and managerial school personnel being assigned a teaching workload.
	Identifying private educational institutions by type of subsidy (subsidised or independent according to UNESCO's framework).	Reporting transfers from the government to parents' associations: the funds are transferred but they are reported in the budget as a central expenditure.	Line ministries tend to report their programmes in the closest category to their function, even if they are educational (for example, the Defence Ministry's military schools are reported as expenditure on defence).
	Incorporating statistics on INATEC's formal educational programmes (Questionnaires A & B).		Incorporating data on pre-primary education programmes which fall outside the responsibility of the MoE into the UIS Education Survey (MIES).
	Quantifying extra budgetary expenditure (ALBA).		Incorporating data on TVET programmes (secondary and tertiary education) which fall outside the scope of the MoE into the UIS Education Survey (SECAP).
			The conditional cash transfer programme "Human Development Bonus" establishes an educational condition which is not monitored. Additionally, no differential payment is contemplated for families with and without school-age children. The prevalent criterion is to avoid the inclusion of this programme under "Education".