# Household Education Spending

**Approach and estimation techniques using household surveys**

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# Key Concepts

- A household is generally defined as a person or group of persons who live in the same home, under the authority of a head. A household is not necessarily the equivalent of a family, as non-family members can live in the home

- Household education spending denotes all the expenses incurred by a household for the education of one or more of its members.

# Conceptual framework of Household Education Spending

- Assessment of household spending is not necessarily the same from country to country or one type of survey to another

- ➔Review the main household expenditures and agree on a list that could be considered as educational

# Data Sources

- **Budget consumption surveys:**
  - Estimate expenses incurred over a given period for various items, including those for education of household members
  - Their main objective is usually to measure household consumption in general, and the level of detail of the education question or section will vary from survey to survey

# Data Sources

- **Multi-purpose household surveys:**
  - Collect data on several aspects, including education (as well as healthcare, housing…)
- More accessible in many countries
  - Conducted to monitor progress of the Millennium Development Goals and progress made by national poverty reduction programmes
  - Examples: The Core Welfare Indicators Questionnaire survey (CIWQ) , The Living Standards Measurement Study survey (LSMS), The Demographic and Health Survey (DHS), Multiple Indicator Cluster Surveys (MICS)

# Identification of the variables necessary for the analysis

- According to the definition of the UIS guide, household education expenses are:
  - (a) direct payments by pupils/students and households to schools;
  - (b) payments by pupils/ students and households for direct purchases of personal items used in schools; and
  - (c) what households spend on pupil/student living expenses.
- Two main criteria can be used to define private education expenditure, namely its <u>direct link with schooling</u> and its <u>mandatory nature</u>.

# Classification of the variables

- Type of expenditure: Household payments *to* educational institutions vs Household payments for education goods and services purchased *outside* educational institutions

- Level of education

- Type of educational institution: public vs private

# Classification of the variables

| Minimum/common set of questions | Household expenditure in educational institutions | | | | Household expenditure outside educational institutions | | | | | | | 'Other' categories-- to re-assign or leave out | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | **Tuition and other fees** | | | Ancillary fees paid to institutions (canteen, board, transport) | **Goods and services required for school attendance** | | | **Goods and services not required for school attendance** | | | | | |
| | | | | | Uniforms and other school clothing | Textbooks and school supplies | | Private tutoring | Canteen and transport to school purchased outside of institutions | | Other not required (but linked to school attendance) | | |
| **Nepal** | Tuition fees | Other fees (exams admission, events, etc.) | | | Uniforms | Textbooks and supplies | | Private tuition | Transport | | | Others (snacks, tea, etc.) | |
| **Vietnam** | Tuition fees | Contribution to school construction fund | Parents' fund, class fund | | Uniforms | Textbooks and reference books | Other educational materials | Extra classes linked to curriculum | | | | Other education costs (transport, lodging, etc.) | |
| **Côte d'Ivoire** | Tuition fees | Inscription and other fees | SMC or PTA | | Uniforms, sports and other clothing | Books and other teaching materials | | Private tuition, repetition, extra courses | Transport | Food, canteen, lodging | Contributions to extra-curricular activities | Identity documents required for school attendance | Other school expenses |

# Estimating per student average

| Household identification code | Enrolled child identification code | Level of education | Total education expenditure | School expenses | Uniforms | Equipment and supplies | Other expenses (transport, canteen etc.) | Type of school attended (Public/Private) | Socioeconomic variables: gender… | Weightings |
|---|---|---|---|---|---|---|---|---|---|---|
| M001 | 01 | Prim. | | | | | | | | |
| M001 | 02 | Prim. | | | | | | | | |
| M001 | 03 | Sec 1. | | | | | | | | |
| M002 | 01 | Prim. | | | | | | | | |
| M003 | 01 | Sec 2. | | | | | | | | |
| M003 | 02 | Prim. | | | | | | | | |

# Estimating per student average

- The average expenditure per student per level of education equals the weighted sum of all expenditure of/for students enrolled at that level of education, divided by the weighted sum of students enrolled at that level of education.

$$\widehat{\overline{y_g}} = \frac{\sum_{i \in s} w_i * y_{gi}}{\sum_{i \in s} w_i * I_{gi}}$$

- $\widehat{\overline{y_g}}$ is the weighted average of expenditure on education for education level $g$
- $i$ identifies the individual $i$ enrolled at a given level $g$
- $g$ stands for the level of education, $g$ being pre-primary, primary, secondary, etc.
- $y_{gi}$, **is the** total expenditure on education made on the i*th* student in the sample $s$ enrolled at level of education $g$
- $I_{gi} = \begin{cases} 1, i \in U_g \\ 0, otherwise \end{cases}$ U$_g$ is the considered sub-group of students enrolled at level of education g
- $w_i$ = the weight of the i*th* student in the sample
- **S** is the sample of the household members that participated in the survey.

# Challenges

- Sampling errors
- Non-sampling errors:
  - *Non-response errors*
  - *Measurement errors*
  - *Coverage errors*
- Seasonal bias: arises when there is significant seasonal variation in education expenditure (such as at the beginning of the academic year compared to the rest of the year) and the survey is not designed to collect data for all periods in the year

# Thank you!