**TERMS OF REFERENCE**

**Purpose of the Assignment:** Short-term consultancy to contribute to the data analysis and coordination of the Dropout Study.

**Section Submitting:** SPEAR

**PURPOSE AND OBJECTIVE.**

The Data Analysist will be responsible for a) the data analysis of the first wave of the Longitudinal Dropout Study in Primary Education in Mozambique and b) liaising with the implementing partner, *Universidade Pedagógica*, during a four-months period. The consultant will work under the direct supervision of the Research and Evaluation Specialist (P4) of the Social Policy Evaluation and Research (SPEAR) section, and in close collaboration with the Statistician and the Data Manager of the research project. The research will directly contribute to evidence generation (milestone of output 4) for policy dialogue and inform activities for outcome 3 in the Education CPD for 2017-2020.

**METHODOLOGY AND TECHNICAL APPROACH.**

The Longitudinal Dropout Study aims at exploring the factors and reasons behind children’s school dropout in primary schools in Mozambique, with a special focus on girls. The pilot phase of the study was conducted in 2017 in Zambezia Province, and in 2018 the data collection has been scaled-up to all provinces of Mozambique. The methodological approach foresees the combination of both quantitative and qualitative components to understand and explore the reasons behind dropout in a more holistic way. To this effect, the research covers a total of 60 random selected public primary schools in which approximately 5,400 children were randomly selected from different grades. The unit of analysis is the list of enrolled children in selected grades at the beginning of the school year and their attendance was regularly assessed during data collection, at the end of school year. This allows the research to monitor children that are still in the school system as well as children temporally or permanently dropping out of school, understanding causes and implications, and what keeps some children with similar backgrounds in school (positive deviants).

Despite children are not directly surveyed, information about children is collected by different actors surrounding children’s lives such as their families, school directors and teachers, as well as community leaders; and information will be triangulated in the analysis. This research will thus investigate the main existing hypotheses on the causes of drop-out and absenteeism in primary education along four different domains of variable: the child, his/her family, the school and the community/environment. Same children will be tracked for a period of at least three years (pending on funding), at the end of the school year (third trimester).

Data collection comprised four main components, namely the i. School survey aiming at gathering information on school, director, teachers, classes and selected children characteristics; additionally, children, teachers and directors’ attendance was frequently monitored during fieldwork with the objective of identifying and understanding the patterns of absenteeism, re-entry and drop out; ii. Household survey: selected children’s households were tracked and interviewed to gather information around target children and family characteristics, including family relation with the school; iii. Community survey: community leaders participated to the study as they are the most knowledgeable persons in the community who can provide relevant information on the characteristics of the community where selected children live; iv. Qualitative interviews (to be conducted in 2019): individual interviews with the local government at district level will be conducted to explore its perceptions on school dropout and its involvement in fostering school retention. Additionally, focus group discussion will be carried out with school and community members to have a deeper insight into the patterns and reasons for children to drop out of school.

Data collection for the quantitative component was conducted by the implementing partner, *Universade Pedagogica* (UP) with resort of university students and professors. UP will also be involved in the analysis of data and final report writing. While the qualitative component is expected to be carried out early next year.

The consultant will be responsible for:

1. Data analysis in STATA, focusing on gender dynamics based on descriptive and multivariate modelling, in line with the analysis plan to be agreed with the Principal Investigator (UNICEF) and Statistician (UP);
2. Preparation of the Technical Report which will include sampling methodology, data management methodology, coding procedures;
3. Write up of the results;

**ACTIVITIES AND TASKS.**

The Data Analyst will be responsible for contributing to the analysis and drafting of the final report. Specifically, she/he will:

* Draft the technical report (including sampling methodology, data management methodology, coding procedures) in close collaboration with the study statistician and the data manager;
* Produce descriptive analysis and their visualisation, based on the analysis plan;
* Conduct multivariate quantitative analysis of data collected, generating evidence on patterns and factors behind absenteeism, drop-out and re-entry with a focus on gender dynamics;
* Analysis of profiles of positive deviants (children with similar characteristics but who do not follow the same patterns of absenteeism, drop-out and re-entry) especially for girls and identify major factors contributing to stable presence;
* Analyse the impact of school-based factors such as management and attendance monitoring, teachers’ characteristics etc.;
* Produce data visualization of key results for the presentation of preliminary findings;
* Contribute to the draft of the analytical final report in specified sections, and coordinate inputs from UP;

**DELIVERABLES AND PAYMENTS.**

Payments will be processed upon acceptance of the corresponding deliverable and against an invoice that will refer to the contract reference and deliverable number. Payments will be approved by the respective section chief.

*Deliverable 1:*

Delivery timeframe: Mid - January 2019

Deliverable/product(s): Draft of the technical report (includes sampling methodology, data management methodology, coding procedures)

*Deliverable 2:*

Delivery timeframe: End of February 2019

Deliverable/product(s): Completed statistical analysis of data and its visualization (all models, graphs and tables)

*Deliverable 3:*

Delivery timeframe: End of March 2019

Deliverable/product(s): Draft of the results on the specified sections of analytical report (including the methodology);

**MANAGEMENT AND SUPERVISION.**

The Consultant will be directly supervised by the Research and Evaluation Specialist (P4) as the Principal Investigator of the Dropout Study and will closely work with the Statistician (from UP) and the Data Manager (UNICEF Consultant) for the analysis of data collected.

This assignment is expected to have an overall duration of 4 months, starting from December 2018 to end March 2019.

**QUALIFICATIONS AND SPECIALIZED KNOWLEDGE.**

**Academic qualifications:**

Masters’ Degree in Statistics, Economics, Education or another relevant field; PhD is an asset.

**Work experience:**

* At least 5 years’ experience of analyzing large and complex data sets such as household or educational surveys using statistical software (STATA);
* At least 2 years’ experience working in the analysis of Education related indicators is an asset;
* Ability to produce data visualizations (graphs in STATA and Excel) to present surveyed data;
* Experience in coordination of multiple project outputs and partners.

**Specific knowledge, competencies, and skills required:**

* Advanced technical knowledge of econometric technics in application to social and educational fields;
* Strong analytical and drafting skills in English and Portuguese, with attention to detail;
* Ability to work in a team to meet deadlines;
* Excellent communication skills;
* Knowledge of the Mozambican context and partners is an asset.

**Language skills:**

Fluency in Portuguese and English is required.

**CONDITIONS OF WORK.**

The Consultant will be based in Maputo.

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| **Items** | **Provided by UNICEF** | | **Remarks** |
| **Yes** | **No** |
| Service incurred death, injury or illness | X |  | Per the provisions of CF/IC/2013-001 on insurance coverage “in cases of service-incurred injury, illness or death under a third-party provider”. |
| Health Insurance |  | X |  |
| Office Space |  | x |  |
| Computer in office premises |  | x |  |
| Access to printer in the office premises |  | x |  |
| Airtime |  | x |  |

**IN-COUNTRY TRAVEL.**

No travel is foreseen under this consultancy contract.

**EVALUATION CRITERIA.**

The selection of the consultant will be based on a “best value for money” principle. Interested candidates should, in addition to submitting their CV and cover letter, indicate their all-inclusive fees (including travel, subsistence costs, etc.) for the services to be provided. The shortlisted candidates will be asked to provide a written sample of their previous work. The office shall select the individual who quoted the lowest fee from the list of individuals who are deemed technically suitable for achieving all tasks in time. The technical evaluation criteria are stipulated below.

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| **Item** | **Technical Criteria/Qualifications** | **Max. Points** |
| **1** | **Education** | **20** |
| **1.1** | University Degree in Statistics, Economics, Education | 10 |
| **2** | **Work Experience** | **20** |
| **2.1** | At least 5 years’ experience analysing large and complex data sets such as household or educational surveys using statistical software (STATA) | 20 |
| **2.2** | At least 3 years’ experience working in analysis of Education indicators | 10 |
| **2.3** | Experience in coordination of multiple project outputs and partners | 10 |
| **3** | **Technical Skills and Knowledge** | **20** |
| **3.1** | Advanced technical knowledge of econometric technics in application to social and educational fields | 10 |
| **3.2** | Ability to produce data visualizations (graphs in STATA and Excel) | 10 |
| **3.3** | Strong analytical and drafting skills in English and Portuguese | 20 |
|  | ecblank**Total Technical Score** | **90** |
|  | **Minimum Technical for pass to financial assessment** | **80** |
|  | *Only those candidates meeting the minimum technical score will be eligible for further review.* | |