

# Educational Migration Prospects and Human Capital Investments: Longer-term Outcomes

This document extends the initial preregistration by considering longer-term outcomes. The primary outcomes listed below reflect the “Additional longer-run outcomes” already mentioned in our original preregistration (AEARCTR-0009992, see Experimental Details). Our main data source is a phone follow-up survey, in which we will re-interview previously baselined O-level and A-level students. The survey is scheduled to be conducted in the second half of June and July 2025 (i.e., about three years after the intervention). The analysis will follow the same empirical approach as outlined in the original preregistration (see Experimental Design).

## PRIMARY OUTCOMES

Former O-level and A-level students faced distinct post-intervention choices. Former O-level students needed to decide whether to continue with A-level studies to become eligible for the Malengo program. By contrast, former A-level students, having already completed A-level studies, could apply directly to the Malengo program or pursue other educational or economic opportunities. We therefore define slightly different primary outcomes for each group.

### A-level students

#### Interest in studying abroad

- Index based on the following items:
  - Having applied to the Malengo program (as recorded by Malengo)
  - Having seriously considered a scholarship to study abroad (dummy for mentioning a scholarship to study abroad among their top three preferences after secondary school)
- If too many respondents list a scholarship to study abroad among their top three preferences, we will treat it as an ordinal outcome to capture more variation (3 first preference, 2 second preference, 1 third preference, 0 not mentioned)

#### Education, mobility, and aspirations

- Index based on the following items:
  - Being currently enrolled / having been enrolled / having been accepted for future enrollment in a tertiary education institution
  - Moved to a different district for study- or work-related reasons
  - Where do you want to live when you are 35 years old? (dummy for abroad)
  - How much money would you like to earn when you are 35 years old?

#### Family planning

- Index based on the following items:

- Being married or engaged
- Having children
- Desired age at first child (actual age at first child for those who are parents) (negatively coded)
- Desired number of children

## **O-level students**

### Interest in studying abroad

- Index based on the following items:
  - Having applied to the Malengo program (as recorded by Malengo)
  - Having seriously considered a scholarship to study abroad (dummy for mentioning a scholarship to study abroad among their top three preferences after secondary school)
- If too many respondents list a scholarship to study abroad among their top three preferences, we will treat it as an ordinal outcome to capture more variation (3 first preference, 2 second preference, 1 third preference, 0 not mentioned)

### Education and aspirations

- Index based on the following items:
  - Having completed A-level studies
  - Until what educational degree would you like to study?
  - Where do you want to live when you are 35 years old? (dummy for abroad)
  - How much money would you like to earn when you are 35 years old?

### Family planning

- Index based on the following items:
  - Being married or engaged
  - Having children
  - Desired age at first child (actual age at first child for those who are parents) (negatively coded)
  - Desired number of children

## **SECONDARY OUTCOMES**

### Subjective wellbeing

- All things considered, how satisfied are you with your life as a whole these days on a scale from 1 to 10?

### Labor market outcomes

- Index based on the following items:
  - Having worked for pay or having been self-employed in past three months

- Having a formal job
- Total income earned in past three months

### Interest in tertiary education in Uganda

- Index based on the following items:
  - Having applied for enrollment in a tertiary education institution in Uganda (coded as 1 for those who are currently enrolled or have been enrolled)
  - Having applied for a scholarship to study at a tertiary education institution in Uganda
  - Having seriously considered tertiary education in Uganda (mentioning tertiary education in Uganda among their top three preferences after secondary school; coded as 3 first preference, 2 second preference, 1 third preference, 0 not mentioned)

### Direction of interest

- In a more exploratory analysis, we will study how the intervention affects preferred and actual study subjects and occupations (particularly with respect to their international portability). We will consider the following variables:
  - Number of study options mentioned among their top three preferences after secondary school
  - Dummy for mentioning a foreign option among their top three preferences after secondary school
  - In which occupation do you want to work when you are 35 years old?
  - Study subjects mentioned among their top three preferences after secondary school
  - Subject choices of those who are currently enrolled / have been enrolled / have been accepted for future enrollment in a tertiary education institution (only A-level students)
  - UACE subject choices of O-level students who continued with A-level studies
  - Occupation of those who have a job

### Perceived educational standard of the top preference after secondary school

- What minimum exam score do you believe someone needs to have a realistic chance of achieving this option, beyond just being eligible?

### Disappointment and regret about exam results

- Index based on the following items:
  - Looking back, did you expect a better UCE/UACE result than the one you obtained?
  - How disappointed did you feel about your exam performance when you learnt about your final UCE/UACE result on a scale from 1 to 10?
  - I regret how I prepared for my UCE/UACE exams.

## Knowledge of Malengo

- Do you know any study abroad programs? (dummy for mentioning Malengo; dummy for knowing any)

In addition to the dimensions of effect heterogeneity already specified in our original preregistration (see Experimental Design), we will also examine whether individuals who were attending boarding school at the time of the intervention experienced different effects.

As part of our pre-specified secondary analyses, we will also explore mechanisms that might explain the lack of improvement in students' final-exam grades and study effort. Candidate mechanisms include overconfidence in expected grades, perceived educational standards of the Malengo program relative to alternative pathways, beliefs about the probability of being admitted to the Malengo program, economic hardship, and others. We will also investigate why students did not apply to the Malengo program.

In addition to the above analysis based on survey data, we will also use administrative data on exam performance from the Uganda National Examinations Board and application data from Malengo to examine the effect of the intervention on test scores at the school, student, and student-subject level, the number of UACE graduates at the school level, and the number of applications to the Malengo program at the school level. This analysis will also consider lagged treatment effects.

Finally, we will also consider an alternative treatment: the randomized admission of shortlisted applicants from different schools to the Malengo program. The treatment is defined at the school level as a dummy: it equals 1 if at least one student from the school was shortlisted by Malengo (i.e., entered the randomization pool), and 0 if shortlisted students from the school were not selected. We will evaluate this treatment using the same outcomes and data sources described above and therefore register it here. However, we may decide to publish these results together with those from our main analysis of admission to the Malengo program (AEARCTR-0012924). This is because the main analysis also captures potential spillover effects of admission to the Malengo program on non-applicants. This decision does not affect our adjustment for multiple testing in either preregistration, as the analysis would be part of the secondary, not primary, analyses.