School Improvement Loans Linked to Increased Learning Outcomes in Uganda

Context and Research Questions

Through its partnerships with financial institutions, Opportunity EduFinance provides School Improvement Loans (SILs) to low-fee private schools. As schools make investments thanks to these loans, it has become important to understand:

1. How effective have school investments been in increasing learning outcomes for pupils?
2. What are the most effective investments that a low fee school proprietor can make to increase learning outcomes for pupils?

Answering these questions will enable us to identify the most effective school investments and allow Opportunity EduFinance to incentivize schools to direct their resources towards those investments.

Methodology

Opportunity EduFinance partnered with University of Chicago's Center for RISC to measure the effectiveness of School Improvement Loans. As a measure of learning outcomes, we used the Primary Leaving Examination scores for 9580 schools in Uganda from 2010 to 2016 and 2019. Measures of loan amounts, investment types and years were available for 77 schools that worked with Opportunity EduFinance through school profile surveys. We compared the changes in test scores of Opportunity EduFinance schools that made an investment to those schools which made no investments.

Findings

1. We found compelling evidence that the investments made by Opportunity EduFinance schools are improving educational outcomes. Opportunity EduFinance schools that made an investment performed 1.09 points better on average on the Ugandan Primary Leaving Examination test (7.24 percentile points) than the rest of the schools in Uganda. This effect was statistically significant.

   Student scores also made a statistically significant shift upwards towards Division 1 (highest) and Division 2 (second highest) ratings. This accompanied a reduction in the students scoring Division 3 and below, but those findings were not statistically significant.

Making an investment

- 1.09 points improvement
- 7.24 percentile points better
- Effect on test scores is significant

After making an investment

- 3.5% more students achieve Division 1 (significant)
- 9.5% more students achieve Division 2 (significant)
- 3.3% fewer students achieve Division 3 (not significant)
- 2.8% fewer students achieve Division 4 (not significant)
- 5.6% fewer students fail the exam (not significant)

Percentage of students who do not take the exam does not change significantly.

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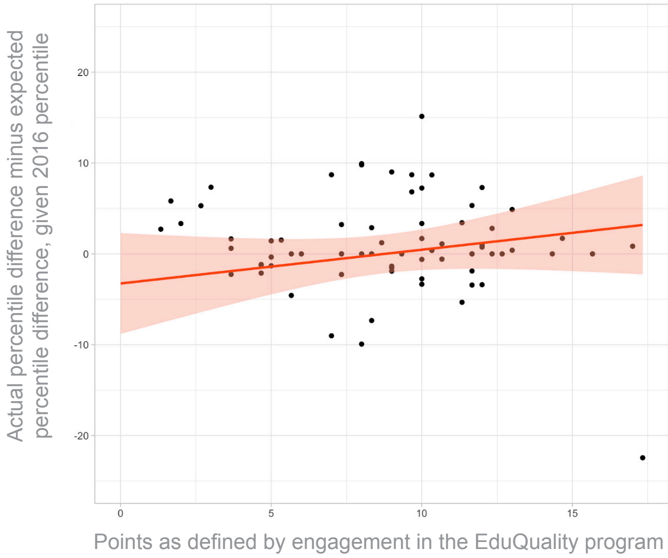
2. **We evaluated the effectiveness of a variety of investment types.**
    a. We found that schools overwhelmingly preferred infrastructural investments such as building classrooms and hallways to pedagogical interventions such as teacher training.
    b. Most infrastructural investments correlated with improved test scores, but this relationship was not statistically significant.
    c. We could not evaluate the effectiveness of pedagogical investments as there were no schools that invested in these areas for whom we also had the necessary test scores.

3. **Participation in EduQuality, a program of Opportunity EduFinance, was also correlated with an improvement in test scores,** but this effect lacked statistical significance.

Engagement with the EduQuality Program show a possible relationship with improving scores

School level of engagement with EduQuality and difference in school ranking from 2016 to 2019.
Linear model shows potential small positive relationship. Adjusted for regression to the mean.



Trend suggests that schools with 1 more engagement point perform:

- **0.37 percentile points**
- **0.13 test points**

better than expected, but this is not statistically significant (P = .2).

One school is excluded from the plot, but included in the regression (0,-66)

Potential Next Steps

To further expand these learning through follow-up data analysis, we would recommend the following measures:

- **Increase the number of schools that invest.** Through ongoing technical assistance offerings to existing and new financial institution partners, Opportunity EduFinance should continue to equip institutions to further mobilize capital for school fee loans, increasing the number of low-fee private schools that access loans and invest.
- **Collect more testing data.** The collection of more testing data from additional schools that have taken school improvement loans will increase the probability of identifying any relationships in findings that are statistically significant.
- **Investigate systematic reasons why some schools performed worse after investments.** Future analysis and using an expanded data set should isolate and investigate reasons why some schools in the analysis reported deteriorating student achievement on national exams after an investment. These findings could inform improvements to outcomes for further investments, providing insights to both lenders and borrowers.

1. **Increase the number of schools that invest.**
2. **Collect more testing data.**
3. **Investigate systematic reasons why some schools performed worse after investments will improve the outcomes of future investments.**