

# A Piece of Paper? The Benefits of a Secondary School Certificate in Tanzania

**Christina Fille**, Lecturer of Economics at the Institute of Social Work (ISW), Tanzania, [christinafille@gmail.com](mailto:christinafille@gmail.com)

**Chad Hazlett**, Assistant Professor, Departments of Statistics and Political Science, UCLA, [chazlett@ucla.edu](mailto:chazlett@ucla.edu)

April 8, 2021

## Motivation

- ▶ Primary school enrollment has increased, policymakers' focus is now on secondary school (Duflo, Dupas & Kremer, 2017).
- ▶ 52% of the eligible student population is enrolled in secondary schools in Tanzania (HRW, 2017).
- ▶ As the education system in Tanzania is evolving the signaling value of a secondary school certificate is expected to increase.
- ▶ The secondary school education system in Tanzania is similar to most of the African countries and therefore the effect of the certificate might be similar to other countries.

## Motivation

- ▶ Tanzania has a unique setting to this study because it offers certificates for passing the secondary school national examination.
- ▶ While other African countries offer certificates for completion of secondary school.
- ▶ The Certificate of Secondary Education Examination (CSEE) is an achievement test offered to candidates who have completed four years of secondary school (NECTA, 2019).
- ▶ The objective of the CSEE is to assess students' skills and knowledge achieved in different subjects at secondary school (NECTA, 2019).
- ▶ Tertiary education, formal employment and government job is restricted to those with a secondary school certificate.

## Study Context

- ▶ The study will be conducted in Tanzania.
- ▶ Completed four years of secondary school at both government and non-government registered secondary schools.
- ▶ The scores they got the first time they took the examination.
- ▶ Students who are re-taking the examination.
- ▶ Students who are taking the examination as private candidates.

## Objectives

1. To estimate the effect of receiving a secondary education certificate on outcomes including socioeconomic status and further education, type of employment and occupation, subjective well-being, health, early parenthood, cognitive function, and social and household status.
2. To estimate heterogeneity and inequalities regarding this effect: how do men and women, the urban and rural, and higher or lower SES students differ in the benefits they see from obtaining the secondary education certificate.
3. To describe the implications of our findings for public policy and for students and their families. The findings may suggest particular sub-groups for whom the benefits are not as large, suggesting problems of discrimination on the labor market.

## Study Design

- ▶ The study will use a Regression Discontinuity Design to estimate the benefits of a secondary school certificate in Tanzania.
- ▶ The discontinuity the study will use will be based on the secondary school national examination, the Certificate of Secondary Education Examination (CSEE).
- ▶ The running variable, secondary school national examination test score, is continuous and the cut-off point is clearly defined and it is a common knowledge across all the students who take the examination.

## Intervention

- ▶ The intervention in this study is passing the secondary school national examination (getting the certificate).
- ▶ The students go through the same education system for four years and at the end they do a national examination.
- ▶ The treatment group are the students who just barely passed the examination and the control group are the students who just barely failed the examination.

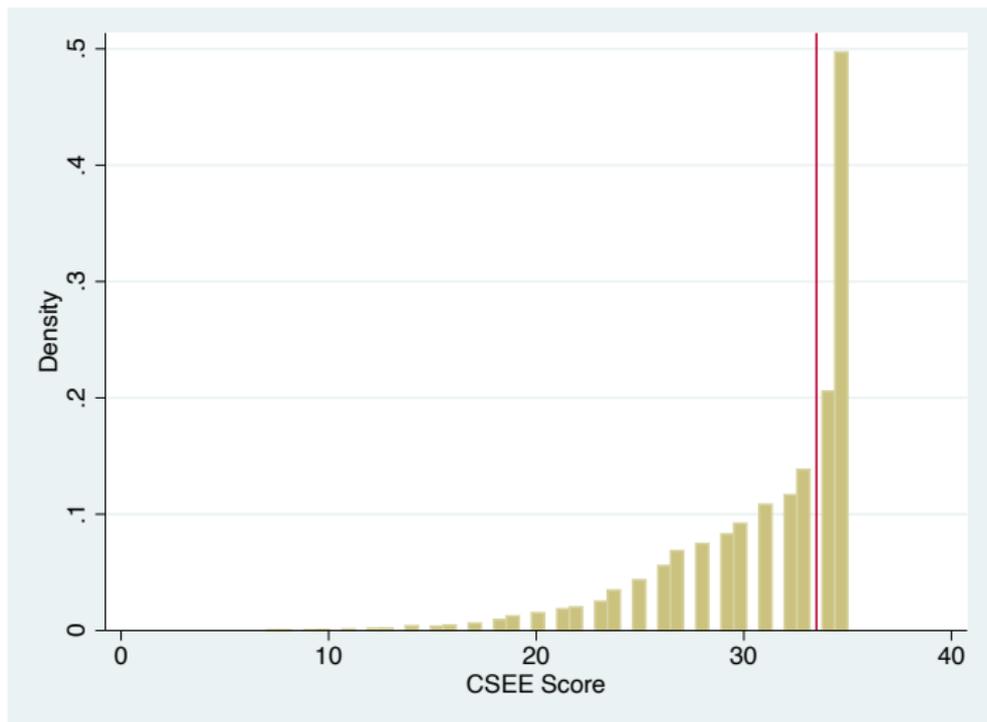
## Regression Discontinuity Design Checks

- ▶ There is a national test with a sharp cutoff determining who gets the certificate.

<b>Division</b>	<b>Point</b>	<b>Description</b>
I	7 – 17	Excellent
II	18 – 21	Very Good
III	22 – 25	Good
IV	26 – 33	Satisfactory
0	34 – 35	Fail

## Regression Discontinuity Design Checks

- ▶ The test scores have ranked the students in a continuous or “smooth” way.



## Regression Discontinuity Design Checks

- ▶ Unusual feature: There are many possible values of the test score but we have over 100k observations with 33 or 34, so we can effectively just compare those two.
- ▶ Other scores can be used for placebo tests and to help evaluate how students that differ by one score compare.
- ▶ The cutoff is unique to the program of interest; i.e., there is no other programs, apart from the program to be evaluated, that uses the same cutoff score.
- ▶ The test scores of a particular student cannot be manipulated by enumerators, potential beneficiaries, program administrators, or politicians.

## Outcomes

- ▶ Income, employment, socio-economic status
- ▶ Education
- ▶ Geography
- ▶ Pre-treatment socioeconomic status
- ▶ Childbearing
- ▶ Cognitive performance
- ▶ Health and psychological well-being
- ▶ Social status, intra-household bargaining

# Data Collection

## The Data we have

- ▶ The secondary school national examination results data set from the NECTA from the year 2003 to 2020.
  - ▶ Candidate name, examination number, sex, aggregate points, division, detailed subjects.

## The Data we plan to find

- ▶ National ID
  - ▶ Occupation, formal employment records, education status etc.
- ▶ Conduct a phone survey to students who got the scores on either side of the boundary.
- ▶ The phone numbers of the test-takers will be gotten from the;
  - ▶ National Identification Authority (NIDA).
  - ▶ Tanzania Telecommunications Companies.

## Conclusion

- ▶ This study will provide a very useful indication of the payoff of earning a secondary education certificate, helping researchers, policymakers, and society at large to assess its value.
- ▶ If well-being is improved by earning this certificate, as we expect it will be, then this can support calls to invest more in quality education.
- ▶ Most importantly in our view, our focus on heterogenous effects will help us to understand who is gaining the most or the least from education, and particularly its value for women and those from lower SES backgrounds.

## Conclusion

- ▶ If the gains in these groups are large, it suggests the need to further ensure that individuals in these groups can access secondary education and are supported in completing it successfully.
- ▶ By contrast if the gains in these groups are smaller than in others, it suggests the need to understand why that is the case, and seek out improvements or address biases elsewhere in the system that may be preventing individuals in these groups from harnessing the potential of secondary education.

THANK YOU