

# Report

Policy Research Center  
Research P r o j e c t Accomplishment Report

**Date:** \_\_\_\_\_ 2020/2/25

**Project Leader:** \_\_\_\_\_ Title Associate Professor Name Stacey H. Chen

**Research Project Title:** \_\_\_\_\_ Estimating the Effect of Maternal Education on Child Health Using Microdata from 20 African Countries

**Duration (yyyy/mm/dd):** \_\_\_\_\_ 2019/4/1 ~ 2020/3/31 \_\_\_\_\_ 1-year

Co-Investigator: Title	Name	Affiliation	(Remarks)
Co-Investigator 1			
Co-Investigator 2			
Co-Investigator 3			
Co-Investigator 4			
Co-Investigator 5			

## Project aims and goals:

One of the goals of this project is to investigate the causal link between female education and child health using African microdata. To achieve this goal, we used policy rollout as an instrument for maternal education to identify the causal link between maternal education and child health. Also, Previous studies in Africa failed to account for contemporaneous confounding factors during the period of education law changes, and evidence from the developed world has shown, the omission of the state-specific trends during the period of education law changes substantially overstates the previously estimated effect of education on outcomes. As a result, we addressed the issue of contemporaneous confounding factors within countries by pooling all of the Demographic and Health Survey (DHS) available from Africa and controlling for country-specific trends in child health by introducing time-varying country characteristics.

## Accomplishment(s) of Project (400 words):

We designed this project to estimate the effect of maternal education on child health using data from 20 African countries. This project started on April 1, 2019, and completed on March 31, 2020. One of the goals of this project is to investigate the causal link between female education and child health using African microdata. Also, previous studies in Africa have failed to account for contemporaneous confounding factors during the period of education law changes, and evidence from the developed world has shown, the omission of the state-specific trends during the period of education law changes substantially overstates the previously estimated effect of education on outcomes. Another concern addressed in this project is the fact that within-country regional variation in primary school enrollment before the reform, might be correlated with both maternal education and local amenity that can affect child health.

We addressed the issue of causality by exploiting the roll-out of the reform across 20 implementing countries in Africa. The policy roll-out gives variation in reform exposure both within and between cohorts (a DD approach). We address the issue of contemporaneous confounding factors within countries by pooling all of the Demographic and Health Survey (DHS) available from Africa and controlling for country-specific trends in child health by introducing time-varying country characteristics. Finally, we extended the DD approach to an RD design and constructed policy intensity variable, which varies across regions to capture within-country regional variation in pre-FPE enrollment rates and growth.

Our preliminary findings suggest that policy exposure significantly increases women's education attainment by less than one year. The extra schooling has a minimal but non-negligible protective effect on child health. Our estimates are markedly smaller, substantially more precise than the previous estimation results. We show that the mechanism for the protective effect is that more educated women have fewer children, more health-seeking behaviors, and greater economic opportunities, although it only slightly improves the health status of surviving children. Interestingly, we find that statistically significant results become insignificant when we include country-specific linear trends. We have presented this research at prestigious conferences and workshops such as the Africa Meeting of the Econometric Society, Academia Sinica, UTokyo-GRIPS Empirical Microeconomics Workshop, and Asian and Australasian Society of Labour Economics Conference.

## Accomplishments:

Please fill in [the list of Accomplishment]

## Other things to report:

For projects that have been approved for the hiring of Research Assistant (RA) using Center RA funds please be sure to report published (or accepted) reports of research results obtained as a result of the employment of RA (e.g. research article; working paper in which the RA is listed as an author; conference presentation for which the RA is listed as an author).

(Please include all items within one page.)

## List of Accomplishment

List of Accomplishment  
(including forthcoming)

(If the description exceeds five in each item, please add a line as necessary.)

### Article

Academic papers (including those published in general journals)

\*For collaboratively authored papers, please underline your name.

\*Please report "Peer-reviewed academic conference papers" as well.

1	Author	Title <small>0 in total</small>	Publisher	Vol/No /Chapt er/Sect ion	Date of Publications	Pages (from)	Pages (to)	Referee Report (yes=1)	Internatio nal coauthors hip (yes=1)	DOI	Open Access (yes=1)
1											
2											
3											
4											
5											

### Book

\*For collaboratively edited or authored books, please underline your name.

\*If you are an author of a chapter in a book, please report in "Article" category.

1	Author	Title <small>0 in total</small>	Publisher	Date of Publications	Total pages
1					
2					
3					
4					
5					

### Verbal report / Conference presentation

\*Here please report "Non-peer-reviewed academic conference papers".

\*When you or co-invetsigetor had a lecture/presentation as invitees, please specify "(invited lecture)" after Event Title.

1	Presenter	Title <small>6 in total</small>	Event Title	Venue	Date
1	Raphael Edem Ayibor	Estimating the Effect of Maternal Education on Child Health Using Microdata from 20 African Countries	Africa Meeting of the Econometrics Society	Rabat, Morocco	11-13 July, 2019
2	Stacey Chen	Estimating the Effect of Maternal Education on Child Health Using Microdata from 20 African Countries	Academia Sinica	Taiwan	10 September, 2019
3	Raphael Edem Ayibor / Stacey Chen	Estimating the Effect of Maternal Education on Child Health Using Microdata from 20 African Countries	UTokyo-GRIPS Empirical Microeconomics Workshop	Tokyo	26 September, 2019
4	Raphael Edem Ayibor	Estimating the Effect of Maternal Education on Child Health Using Microdata from 20 African Countries	Asian and Australasian Society of Labour Economics Conference	Singapore	12-14 December, 2019
5	Stacey Chen	Estimating the Effect of Maternal Education on Child Health Using Microdata from 20 African Countries	University of Tokyo	Tokyo	14 January, 2020
6	Stacey Chen	Estimating the Effect of Maternal Education on Child Health Using Microdata from 20 African Countries	The Centre for the Study of African Economies	University of Oxford	March 22-24