

Universal Secondary Education, Schooling and Women's Empowerment: Evidence from Uganda

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AACC2022

Outline

- 1 Introduction
- 2 Data
- 3 Empirical strategy
- 4 Results
- 5 Concluding remarks

What we find:

- Our findings indicate that women eligible for the program in areas with higher program intensity, experience a significant increase in educational attainment and improvement in women's empowerment.
- The implementation of USE is estimated to have increased the number of completed years of schooling, secondary school and higher education completion.
- The effect on women's empowerment is most pronounced in the domain of human and social assets.

Motivation

- Governments in Sub Saharan Africa (SSA) have committed to increasing public investment in secondary education in-form of school fee reduction or abolition.
- However, few countries have adopted the Universal Secondary Education (USE) policy due to high implementation costs.
- Its vital to assess the impact of nation wide educational policy reforms that provide universal secondary education in SSA.
- Causal evidence is warranted on both the short- and long- term private and social benefits.

Motivation

- Women empowerment is recognized as vital measure of social change, and key for economic growth and development in developing countries (United Nations 2015).
- Potential mechanisms underlying USE → increase education → women empowerment.
 - ① increased vocational/soft skills and resources available (Bandiera et al. 2020)
 - ② improved labour market opportunities (Erten and Keskin , 2018)
 - ③ better attitudes and social norm through improved access to mass media, extensive social networks (Pierotti , 2013), and
 - ④ improve women's bargaining power within households (Anderson and Eswaran 2009).

Objective

- We evaluate the intended and unintended benefits of a free secondary education policy in Uganda on women's outcomes including educational achievements as well as a range of women's empowerment outcomes.
- In particular we address the following questions:
 - ① Did the USE expansion policy in Uganda improve women's long-term educational outcomes?
 - ② Did the education policy also lead to improvements on women's empowerment outcomes?

Contribution

- This study adds to the small but growing body of literature on the long term effects of fee reduction/elimination program at secondary education level in developing countries.
- Contrary to most of the existing evidence, we can identify long term effects on women's education outcomes beyond their formative years.
- The study provides the first empirical evidence on the long term effects of free universal secondary education policy on women's empowerment in SSA.
- The results establish the potential of leveraging a secondary education expansion policy to generate sustained improvement in women empowerment.

Background

Previous studies

- Buvinic and O'Donnell (2019) provides a review of women empowerment intervention in the global south which points to mixed and heterogeneous effects.
- Existing literature evaluates a wide range of women empowerment interventions.
 - ① Life skills vocational training, e.g. life skills development clubs in Uganda (Bandiera et al 2020)
 - ② School based interventions, e.g. high school financial education programs in Brazil (Bruhn et al 2016)
 - ③ Cash transfer/financial incentive programs, e.g. Cash Transfer Program for school aged girls in Malawi (Baird et al 2016), and
 - ④ Information awareness campaigns, e.g. job recruitment info sessions for women in India (Jensen 2012).

Background

Previous studies

- Evans and Mendez Acosta (2021) provides an overview of the studies on the effects of education policies and interventions in Sub Saharan Africa
- A large number of studies examine the impacts of education expansion at the primary schooling level in SSA (e.g., enrolment, completion, drop-out rate, gender heterogeneity, and health).
- Few have studies evaluated education policies in SSA at the secondary schooling level.
 - ① Large scale female scholarship program at secondary schools in Gambia (Blimpo et al 2019, Gajigo 2016)
 - ② 2008 secondary school expansion policy in Kenya (Brudevold-Newman 2021), and
 - ③ Secondary school scholarship program in Ghana (Duflo et al 2021)

Background

Uganda's Education Sector

- Education system in Uganda:
 - ① Established at the start of the post-colonial period and follows a similar structure to that of Great Britain.
 - ② 7 - 4 - 2 system and 2 - 5 years of higher education.
 - ③ Mandatory schooling for all citizens up to age 16.

- Education before 2007:
 - ① Tuition free primary schooling but at secondary level households bear all associated costs.
 - ② Gross Enrolment Rate (GER) WAS 34% (38% vs 30%).
 - ③ Net Enrolment Rate (NER) 23% (23.5% vs 22.5%).
 - ④ Grade 8 (senior one) Gross Intake Rate (GIR) 59%.
 - ⑤ Variations existed across regions with some regions having a higher GER, NER and GIR in comparison to others.

Background

The 2007 Secondary School Expansion in Uganda

- Aims: increase access, reduce costs associated with secondary schooling, improve enrolment and attendance levels.
- Tuition fees were abolished using a grants system provided to eligible students through annual disbursements to participating schools.
- Implementation: Started with the 2006 primary school graduates in all public schools and private schools that opted into the program.
- School enrolment increased by 25% in 2009, with girls constituting 45.7% of the total enrolment (MoES, 2009).
- By 2014, GER, NER and GIR stood at 41, 44 and 61 percent respectively.

Data

- Data Sources:
 - ① 2006 & 2016 Uganda Demographic and Health Surveys (UDHS).
 - ② 2006 & 2010 Uganda National Household Surveys (UNHS).
 - ③ 2002 & 2014 National Housing and Population census.
 - ④ Statistical extracts from the Annual Education Census and the USE national headcount 2007 - 2016.
- Sample Selection:
 - ① Women aged 19 and above at the time of survey in 2016 born between 1984 - 1997.
 - ② Two study samples: primary school completers, all individuals.
- Treatment status: assigned by birth years, migration patterns are accounted for.
- Education outcomes: years of schooling, secondary schooling and tertiary education completion.

Data

- Women empowerment outcomes: follow Miedema et al 2018 framework, a validated cross country comparable measure.
- Three latent domain model capturing 1) human social assets, 2) gender attitudes related to wife abuse, 3) participation in household decisions

Human and social asset index	Gendered attitudes and beliefs index	Decision-making index
<ul style="list-style-type: none">• Years of schooling• Work for cash and/or in-kind• Age 1st sex• Age 1st cohabitation• Age 1st birth• Spouse age difference• Spouse schooling attainment difference• Spouse earning difference	<ul style="list-style-type: none">• When okay to refuse sex• Justified to ask for condom use if husband has STI• Justified to beat woman if she argues• Justified to beat woman if she burns food• Justified to beat woman if she goes out• Justified to beat woman if she refuses sex• Justified to beat woman if she neglects children	<ul style="list-style-type: none">• Woman's healthcare• Household purchases• Spending woman's earnings• Spending partner's earnings• Family/friend visits

Empirical Strategy

- Exploits both cohort variation and geographical variation in USE exposure.
- Cohort variation
 - ① Program eligibility depends on completion of primary schooling starting from 2006 on-wards.
- Geographical variation
 - ① Differential pre-program primary to secondary school transition rates across different districts.
 - ② Transition rate = fraction of primary school completers who proceed to the secondary school level in the pre USE period.

Empirical Strategy

- Geographical variation in USE exposure.

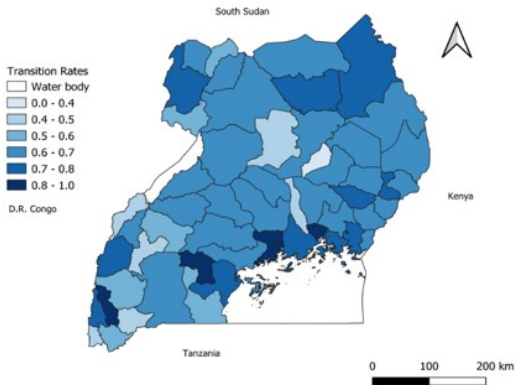


Figure 1: Intensity by district.

Empirical strategy

Difference in Difference strategy

Difference in Differences framework, main specification:

$$Y_{ijd} = \alpha + \beta(Intensity_d * USE_j + \gamma X_{ijd} + \mu_j + \sigma_d + \varepsilon_{ijd})$$

$Intensity_d = (1 - transitionrate)$, average rate in each district among students born 1985-1989.

USE_j , is a dummy equal to one if individual is born $1990 \leq j \leq 1997$ and zero otherwise.

$\sigma_d =$ district dummies, $\mu_j =$ birth cohort dummies

Standard errors are clustered at district level.

Results

Main Result

Table 1: Program treatment effects on education women empowerment index

	(1)	(2)	(3)	(4)	(5)	(6)
	Panel A			Panel B.		
Years of schooling	2.576*** [0.384]	2.417*** [0.373]	2.547*** [0.383]	1.461*** [0.457]	1.401*** [0.439]	1.525*** [0.454]
Secondary school completion	0.197*** [0.055]	0.179*** [0.057]	0.195*** [0.061]	0.094*** [0.030]	0.090*** [0.030]	0.099*** [0.033]
Higher Education Completion	0.181*** [0.057]	0.164*** [0.059]	0.173*** [0.059]	0.096*** [0.030]	0.089*** [0.030]	0.094*** [0.032]
Human and social asset index	0.318*** [0.057]	0.306*** [0.055]	0.306*** [0.060]	0.163*** [0.053]	0.161*** [0.051]	0.165*** [0.053]
Gendered attitudes and beliefs index	0.173** [0.082]	0.166** [0.082]	0.156* [0.086]	0.058 [0.061]	0.063 [0.061]	0.062 [0.066]
Decision-making index	0.143 [0.089]	0.142 [0.089]	0.126 [0.092]	0.048 [0.069]	0.051 [0.068]	0.037 [0.071]
Controls	No	Yes	Yes	No	Yes	Yes
Regional linear trends	No	No	Yes	No	No	Yes
Observations	4419	4419	4419	8259	8259	8259

Notes: Clustered Standard Errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, $p < 0.1$. Source: UDHS.

Results

Treatment effects on disaggregated women empowerment: Human capital/social assets domain

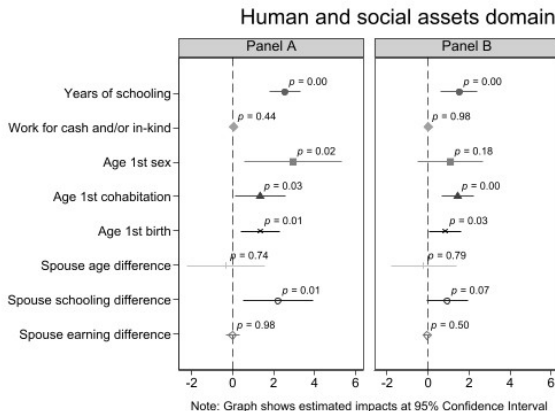


Figure 2: Access to assets and enabling resources.

Results

Treatment effects on disaggregated women empowerment: Gender beliefs and attitudes domain

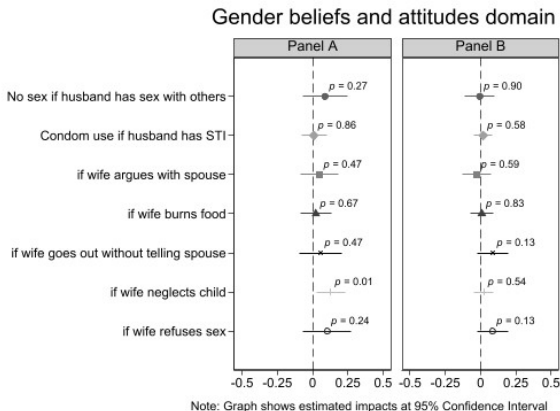


Figure 3: Intrinsic agency.

Results

Treatment effects on disaggregated women empowerment: Household decision-making domain

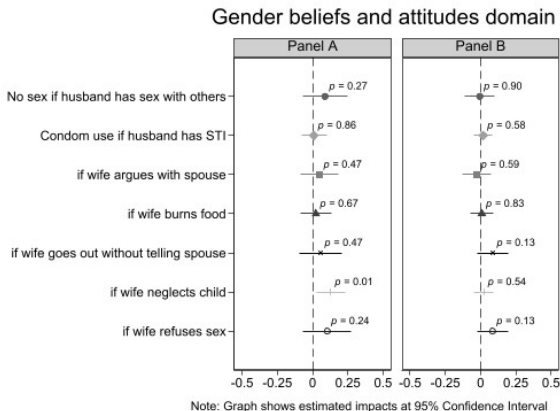


Figure 4: Instrumental agency.

Results

Mechanism

- Possible transmission mechanisms:
 - 1 Access to information
 - 2 Labour market outcomes, and
 - 3 Assortative matching.

Summary of Findings

Educational Outcomes

- Results show that the USE program increased the number of completed years of schooling, a 18% increase relative to the average educational attainment.
- Secondary school and tertiary education completion increased 10% relative to the average completion rates.
- These significant positive effects are consistent with findings elsewhere in SSA.
- The magnitude of effect is larger than secondary school scholarship program in Ghana (Duflo et al. 2021), and the secondary schooling fee reduction policy in Kenya examined by Brudevold-Newman 2021.
- Among men, the impact of the USE on educational outcomes is larger in comparison to women.

Summary of Findings

Women's Empowerment

- On women's empowerment, one percent increase in program intensity is associated with:
 - ① improved access to assets and enabling resources.
 - ② improvement in women's intrinsic agency as measured through the gender beliefs and attitudes domain items.
- Program has no impact on women's instrumental agency which is captured by women's participation in household decision-making.
- Among men, we find that the USE program has a positive impact on their gender beliefs and attitudes.

Concluding remarks

- The USE program has led to significant improvements in educational attainment enhanced women's empowerment.
- Effects on women empowerment are larger than small scale, targeted or stand alone programs aimed at empowering women (e.g. Bandiera et al . 2020)
- These findings establish the potential benefits of leveraging free secondary education policy in SSA to generate sustained improvement in women empowerment.
- Overall benefits therefore justify the high implementation costs involved.
- Current and future policies should address the underlying context-specific constraints within which programs are to be implemented if there's to be greater positive benefits.

Thank you!

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