

Summary

Estimating the Effect of Maternal Education on Child Health and Female Genital Cutting Using Microdata from Africa

Ayibor Raphael Edem

National Graduate Institute for Policy Studies (GRIPS)

This dissertation empirically examines how much an increase in education for African female has advanced child health and reduced female genital cutting on daughters. Identifying the causal effect of maternal education on child outcomes is challenging because unobserved family attitudes/attributes can affect maternal education, the decision to invest in child health, and the decision to have their daughters cut. Thus, identification requires empirical techniques to single out maternal education's variation uncorrelated with family attitudes/attributes.

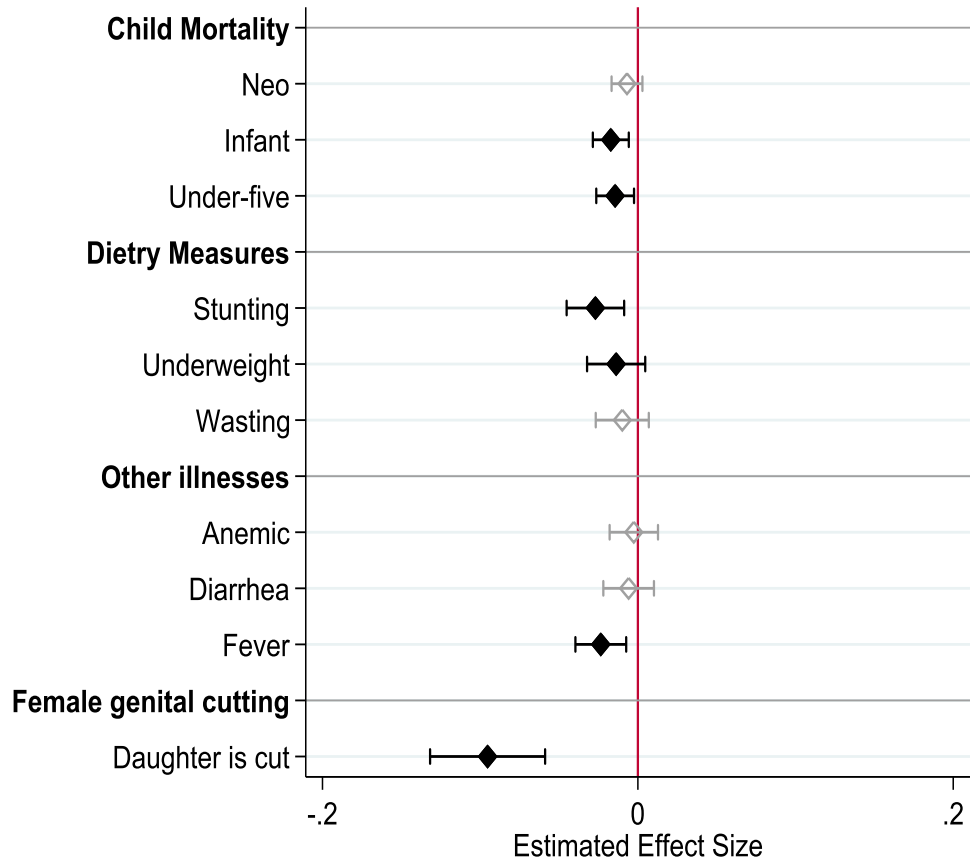
Previous research has used data from one country and exploited its Free Primary Education (FPE) reform as a source of exogenous variation in maternal education across birth cohorts. However, several issues (e.g., health-promotion or poverty reduction policies under the Millennium Development Goal) might have confounded or invalidated the single-country analysis. Also, that country's previous trends in education and health might have driven at least part of the observed

differences across birth cohorts. Furthermore, previous works lack precision due to the small sample size.

This dissertation overcomes the above challenges using data from twenty African countries implementing FPE and using IV methods with a triple difference design. The rollout of the FPE reforms across the continent over the decades provides extra leverage to fix the country-specific trends (either related to the reform or unrelated but contemporaneous policies). Furthermore, this study incorporates the within-country variation in reform intensity across regions, measured by pre-reform primary school enrollment rates. This identification strategy exploits the triple differences in the reform exposure across countries, birth cohorts, and local reform intensities to tease out the exogenous variation in female school enrollment. This result allows this study to pin down how much maternal education can impact child outcomes, including daughters' genital cutting, using IV methods.

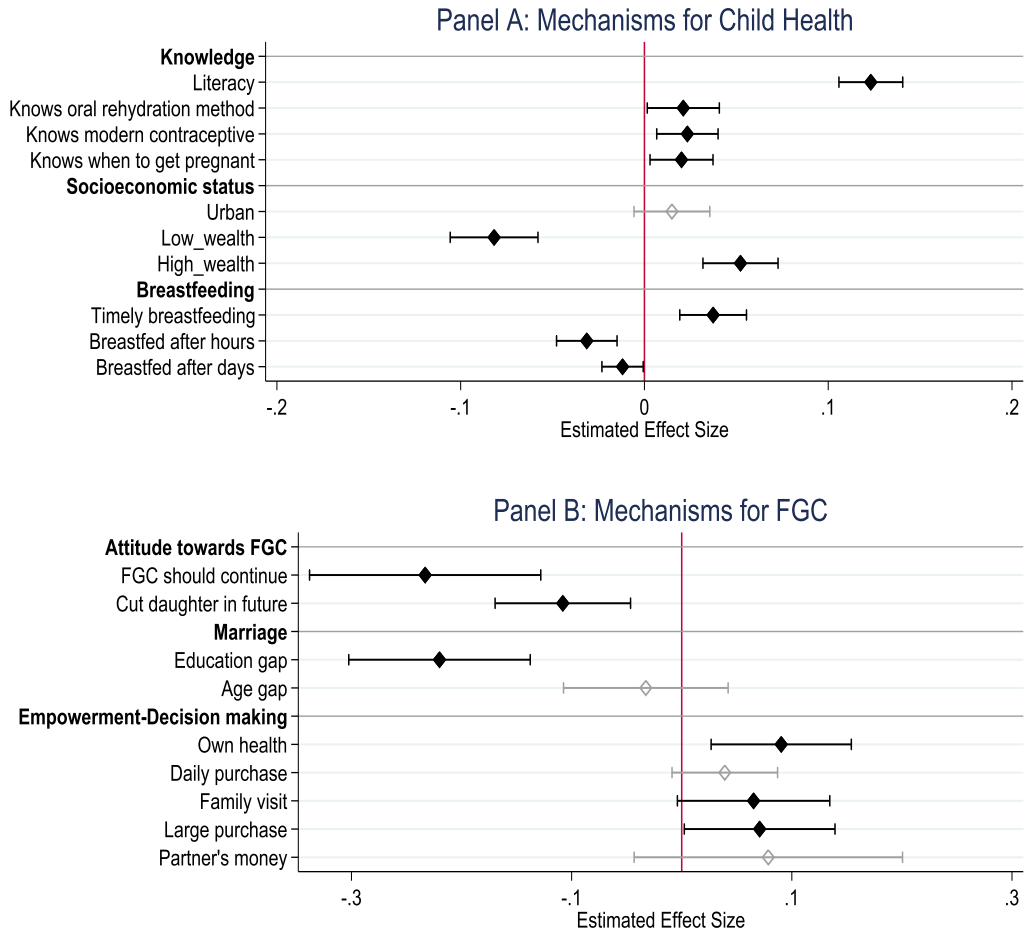
This dissertation discovers exposure to FPE increases female education by approximately one school year. This extra schooling reduces child mortality under age five and decreases stunting, underweight, or fever prevalence. Although similar to previous studies in patterns, most of this study's results are more precise than the previous estimates. The possible mechanisms through which maternal education affects child health include increased literacy, better health knowledge, and prolonged breastfeeding practices. The extra schooling also significantly reduces daughters' FGC prevalence rates because of changes in women's attitudes toward the practice and increases in women's bargaining power relative to their partners. See Figures 1 and 2 for the graphical display of results.

Figure 1: IV estimated effects of maternal education on child mortality, the health status of surviving children, and female genital cutting



Note: 95% confidence intervals are shown. Standard errors are clustered by birth cohort–country and survey-cluster levels. The regressions include basic and socioeconomic controls, and time-varying country characteristics. I also control for region-specific linear trend and region-specific linear kink. The grey color indicates that the estimates are insignificant.

Figure 2: IV estimated effects of years of schooling on socioeconomic behaviors



Note: 95% confidence intervals are shown. Standard errors are clustered by birth cohort–country and survey-cluster levels. The regressions include basic and socioeconomic controls, and time-varying country characteristics. I also control for region-specific linear trend and region-specific linear kink. The grey color indicates the estimates are insignificant.