The Need for More Holistic Interventions and Long-Term Evaluations in Gender & Development

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29 March 2019

There is no question that educational gender parity is good for everyone. When women have equal access to quality education, they are empowered to have greater control over their futures. In addition to a number of social and health benefits, women who are more educated have higher earning potentials. This improves their own personal financial stability and contributes to societal economic development and national gross domestic product.

Although women today are more educated than ever before, in most regions of the world they continue to lag men in total years of schooling (Figure 1). For example, while women and men in Latin America and the Caribbean achieve roughly equal levels of education, in 2010 women aged 15 and over in South Asia had just 4.8 years of schooling on average compared to the average 7.3 years achieved by men.

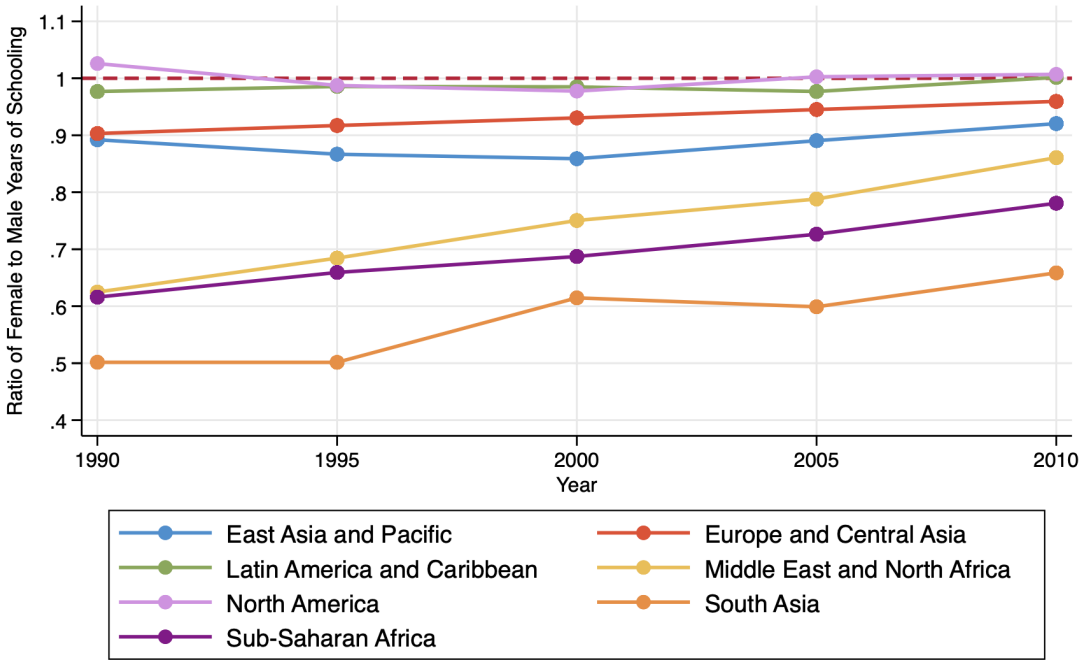

Figure 1: Ratio of female to male years of schooling (population 15 years and over) by World Bank region, 1990 to 2010. A ratio of one indicates gender parity. Regional averages are calculated using country-level data from the Barro-Lee dataset, weighted by country populations.

There also remains a global gender gap in labor force participation rates (LFPRs). In 2010, 49 percent of women (aged 15 and over) were part of the labor force, making up just 39 percent of the total working population. Rates of participation also vary drastically by region: in 2010, the female LFPR was just 27 percent in the Middle East and North Africa compared to 60 percent in Sub-Saharan Africa.

There is abundant evidence demonstrating we have made progress towards closing these gender gaps in education and the labor force. Data from UNESCO shows most countries have achieved gen-

der parity in primary school enrollment, and in North America, Latin America and the Caribbean women actually achieve more tertiary education than men. Over the last decade, development economists have conducted hundreds of experimental and quasi-experimental studies to quantify the effects of various interventions on educational outcomes and economic empowerment. In 2015, the UN endorsed a global goal of achieving gender equality by approving the Sustainable Development Goals (SDGs) that include dozens of targets related to gender (see SDG 4 on education, SDG 5 on gender equality, and SDG 8 on economic growth and work).

Looking only at these statistics and aspirational goals, however, ignores the challenges remaining in achieving gender equality in education and the labor force. Much of the current work in developing and evaluating interventions to improve education and economic empowerment takes a reductionist approach, focusing on specific points along the pathway from education to labor force participation and quantifying success based on short-term outcomes. To push gender equality forward, we need more holistic programs and long-term program evaluations of the right metrics.

While "targeted" interventions that estimate short-term effects of specific programs advance research and provide valuable evidence for policy makers, they generally reveal little-to-nothing about the best combination of policies and programs to support women throughout their education and into the labor force. Even general poverty reduction efforts like cash transfers aren't enough to answer this important question. We can see some evidence of a gap between educational attainment and labor force participation by regressing the change in labor force participation rates on the change in female years of schooling over the same period. As shown in Figure 2 and Table 1, there is no association between the recent increases in female years of schooling and female labor force participation, even when adjusting for regional fixed effects.

We also need more data on the long-term impacts of programs and policies. As noted in a recent working paper of long-run impacts in development economics, we know little about long-term effects of development programs. However, the review also notes early studies in cash transfer programs that began in the 2000s may be amendable to long-term follow-ups. Additionally, they discuss methods to make the long-run program evaluations more successful, including alternative research design and data from utilizing administrative sources, remote sensing, and cell phones.

In addition to pursuing longer-term evaluations of experimental interventions, researchers should continue to conduct quasi-experimental studies that estimate causal effects using observational data. Methods like instrumental variables, difference-in-difference, regression discontinuity, and propensity score matching and weighting enable estimation of causal effects from programs and policies without randomization. While experimental studies are typically considered the "gold standard" for causal inference, the careful design of observational studies can enable exploration of a broader set of important causal questions, including long-term effects.

This call for more holistic programs and long-term evaluations isn't to say that we shouldn't continue to design and test other programs. It may be that more reductionist approaches actually achieve better long-term outcomes for women than comprehensive programs. Taking a more holistic approach to the design of future interventions will provide evidence of the best ways to shift the next generation through education and into empowering employment opportunities.

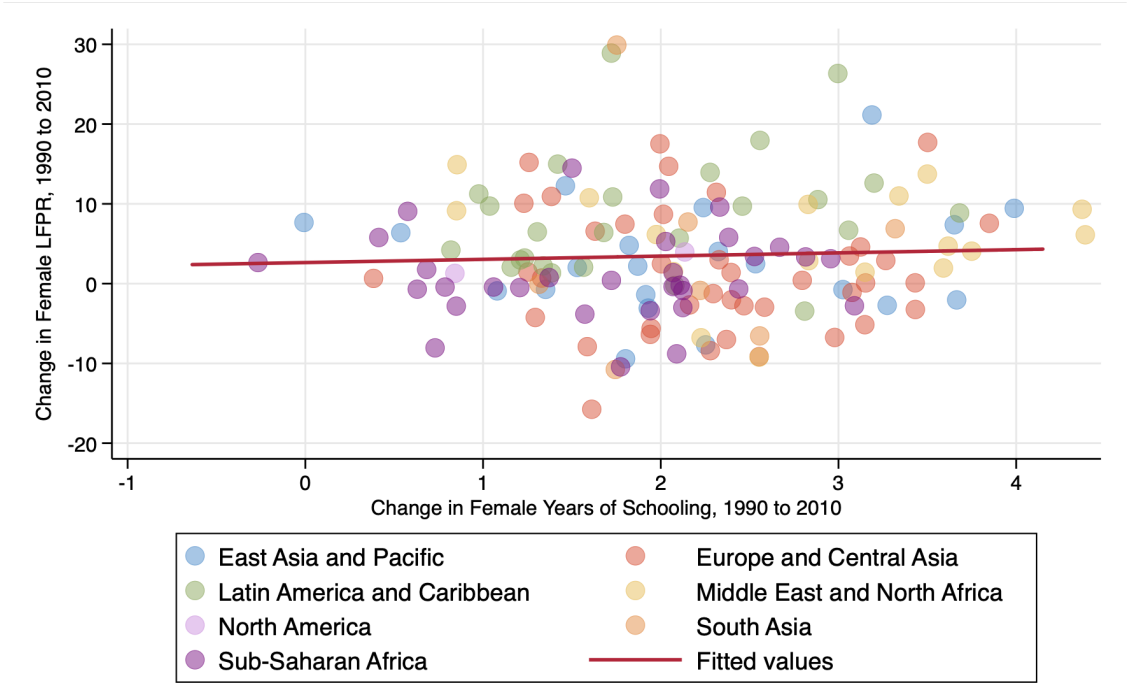

Figure 2: Change in country-level female labor force participation rates vs the change in years of schooling (both population 15+), 1990 to 2010. Educational attainment data from the Barro-Lee dataset and labor force participation rates from the World Bank World Development Indicators database.

Table 1: Regression of the change in female labor force participation from 1990 to 2010 against change in female years of schooling during the same period

	(1)	(2)
Change in Female Years of Schooling, 1990 to 2010	0.440	0.336
	(0.534)	(0.643)
East Asia and Pacific		0
		(.)
Europe and Central Asia		-1.511
		(0.450)
Latin America and Caribbean		5.800**
		(0.009)
Middle East and North Africa		2.290
		(0.353)
North America		-0.0300
		(0.996)
South Asia		0.871
		(0.788)
Sub-Saharan Africa		-1.605
		(0.447)
Constant	2.485	2.162
	(0.130)	(0.338)
Observations	144	144

p-values in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$