

DOI: 10.28934/jwee20.12.pp103-124
JEL: A20, D60

SCIENTIFIC REVIEW

Educating Girls, Educated Women: Dehomogenizing the Impact of Education in Development



Tricia Beck-Peter
American Institute for Economic Research, United States of America
Nikolai G. Wenzel¹
Fayetteville State University, Broadwell College of Business and
Economics, United States of America

ABSTRACT

After a half-century of failed top-down international aid efforts that ignore basic microeconomics, the New Development Economics (NDE) offers an alternative. First, sound institutions (such as rule of law, property rights, contractual enforcement, etc.); second, respect for basic microeconomic principles (from incentives to knowledge). Within the New Development Economics, development economist William Easterly offers controversial and innovative insights; one of these is the ineffectiveness of education - alone, and without sound institutions - for promoting growth. We argue that Easterly is generally correct, but we improve on Easterly's lessons by dehomogenizing education. Specifically, education for girls has high marginal returns: at the micro level, even a slight increase in education dramatically improves the health of girls - and their daughters - in a virtuous cycle. At the macro level, educated women have a significant marginal impact on growth and institutional improvement. We complement a theoretical approach with a case study that demonstrates the

¹ Corresponding author, L.V. Hackley Distinguished Professor for the Study of Capitalism and Free Enterprise, 1200 Murchison Road, Fayetteville, NC 28301, USA, e-mail: nikolaiwenzel@gmail.com

importance and marginal impact of educating girls - even if sound institutions are not yet present.

KEY WORDS: *William Easterly, education, development, girls*

Introduction

In his book *The Elusive Quest for Growth: Economists' Adventures and Misadventures in the Tropics* (Easterly, 2001), development economist William Easterly blazes heroic trails, with a micro-based development policy. Among his controversial arguments, Easterly shows that education in developing nations, though a cornerstone of mainstream development economics, does not result in economic growth. Easterly supports this argument by showing there is no correlation between primary school enrollment and GDP growth. We argue that Easterly's argument is correct, but incomplete: his findings can fruitfully be supplemented by a dehomogenization of education, with a particular emphasis on the education of girls, and the role of women in development.

Easterly demonstrates that education has failed to stimulate economic growth.² His evidence begins with the "lack of association between growth in schooling and GDP growth" (Easterly, 2001, 73). Easterly attributes the inability of education to stimulate growth to institutional frameworks and systemic problems, including failed incentive structures. In sum, "if the incentives to invest in the future are not there, expanding education is worth little. Having the government force you to go to school does not change your incentives to invest in the future" (ibid). The problem is compounded by institutional frameworks that reward political over economic activity (Gwartney et al., 2016).

The New Development Economics (NDE) is as hopeful as it is frustrating. Indeed, after a half-century of bankrupt development theories that probably do more harm than good (Easterly, 2006; Coyne, 2013), a new approach, based in reality rather than fancy models or quixotic aspiration, is welcome and refreshing. However, the next step is unclear. Now that we know the recipe – sound institutions that transmit knowledge and generate the right incentives – how do we get there?

² For more traditional views of education and development, see Heyneman and Lee, 2016; Birchler and Michaelowa, 2016; or Riddell and Niño-Zarazúa, 2016.

To be sure, others have written on this (see, e.g. Tullock, 1967 and 1975, or Olson, 1982). But the political problems are as intractable as the economics are (ultimately) elegant and simple. For example, Stroup (2011) builds on the work of Scully (1988, 1992, and 2002). Yes, economic freedom is correlated with growth, and with more equal distributions of income. But, beyond that, economic freedom is also specifically correlated with the well-being of women. Indeed, Stroup (2011) finds positive correlations between economic freedom and female educational attainment, as well as female parliamentary representation. He also finds negative correlation between economic freedom and maternal mortality rate and adolescent fertility rate, as well as the United Nations Development Programme's Gender Inequality Index. In sum, economic freedom increases the well-being of women. This is all fine and good. But how do we get there? In this paper, we will argue that one of the paths to institutional change and economic freedom is the education of girls, and the women they will become.

It is understandable for any New Development School economist to adopt a pessimistic attitude regarding economic development, and the sad string of failed silver bullets. And we agree with Easterly (2001)'s overall assessment of education's irrelevance for development. However, there is a spot of good news: Easterly's argument is incomplete, for two reasons.

The first comes from differentiation of the human capital gains to various degrees of education.

What Easterly is leaving out in each of the cited cases is that the growth in enrollment was only in primary school. In 1991, right after the end of the period studied, secondary school enrollment was still very low. Of those countries, only two have secondary education enrollment available in the World Bank Database: Angola with 12% enrollment, and Mozambique with 7% enrollment (<http://data.worldbank.org/indicator>). The first available year of data for the remaining countries shows the highest rate of secondary school enrollment in Ghana in 1995, at 36%. This analysis of UN Data shows that none of these countries has high secondary school enrollment at the time of study. Easterly's omission, however, lies in assuming that the human capital gains from education increase in a uniform linear fashion, and that additional years of schooling generate uniform marginal gains, which should translate into marginal increases in GDP. Years of schooling, however, do not generate such marginal gains, because of the difference in content between primary schooling and secondary schooling. Primary

schooling is designed to provide basic skills: literacy and numeracy. It is logical that increasing these basic skills will not lead to high levels of economic growth, because these skills alone do not create particularly useful human capital. The skills gained in secondary schooling are different from those gained in primary school. These skills include civic knowledge, critical thinking, problem solving, and analysis – the skills that empower individuals to contribute to markets and political systems. These are the skills that empower inventors, innovators, and entrepreneurs, the people who can generate increases in GDP.

The second omission in Easterly's work is that he is looking for visible evidence of economic growth, rather than extrapolating data regarding *potential* for growth based on the quantity and quality of human capital made available to a nation. A well-hidden source of potential human capital lies under half the sky: women. Educating girls will create economic growth and mitigate the pitfalls detracting from the success of education initiatives implemented without regard to a gender lens. This assertion is based on the higher returns to investment derived from investing in the health and knowledge of women, and from the tendency for educated women to become civically involved and contribute human capital to the private and public spheres. Education has important effects on the lives of girls that their male counterparts will not experience, or will experience with much lower marginal returns. The most critical immediate effect of educating a girl is education's ability to postpone marriage. Postponing marriage, especially in the case of child marriages, is the starting point for a chain reaction that improves the lives of girls, the women they grow into, and the children they will someday bear.

After a literature review, Section one starts with the microeconomic importance of educating girls, using the simple example of postponed marriage and childbirth. Section two makes the "meso-economic" bridge between the micro-level of girls' education and the macro-level of institutional change and economic development (see Dopfer *et al.* 2004). Section three offers a case study. The final section concludes.

Literature Review

Easterly's work nestles within the "New Development Economics" (NDE). NDE emerged in response to a half century of failed development policies that transferred wealth from rich to poor countries, while ignoring

the laws of economics (Easterly 2001, Boettke *et al.* 2008). Instead of relying on facile assumptions of policy-makers benevolence and omniscience, NDE applies the tools of robust political economy (see Leeson and Subrick 2006, Pennington 2011, and Ikeda 2003). That is, which institutions will be robust enough to accommodate the absence of benevolence and omniscience among policymakers?

Firstly, NDE borrows from Public Choice, in questioning the benevolence of policymakers, and studying politics as exchange, rather than politics as romance (Buchanan and Tullock 1962, Klein 2005, Bastiat 2012[1850]) or Gwartney *et al.* 2005, chapters 5 and 6). Post-romantic analysis of government pushes us to seek institutional designs that will be robust in the face of actors who cannot be assumed to act towards some "common good." Instead, the political problem comes down to adopting institutions that will constrain bad behavior and provide incentives for good behavior. A post-romantic analysis calls for rule of law, and constitutional constraints on the state. It also calls for limited government, to minimize the opportunities for government capture, wealth redistribution, and advancement of private preferences through public means. Voluntary mechanisms (the market and civil society) align incentives properly, and thus vastly outperform the ballot box in aggregating and revealing preferences.

Second, NDE borrow from Austrian economics the skepticism about policymakers' full knowledge. As early as 1920, Austrian economist Ludwig von Mises explained that communism – as the *reductio ad absurdum* of central planning – could not, *ex hypothesi*, function (Mises, 1990[1920]). Because communism lacks private property, it lacks prices, and thus competition. Without the profit and loss system to convert individual choices into efficient outcomes, through division of labor and knowledge, there cannot be efficient allocation of scarce resources and communism must fail. Mises was ultimately right, although it took another 70 years before communism crumbled. More broadly, Mises student F.A. Hayek rebelled against what he perceived to be an "abuse of reason," or the (inappropriate) use of the methods of the natural sciences in the analysis of social phenomena (see Hayek, 1979[1952]). Hayek demonstrated why the neoclassical paradigm was fallacious, from its assumptions to its methodology. A full literature can be summed up into a fundamental problem: in a world without omniscient agents, how can economic activity take place, and how can social cooperation happen? The quest for robust

institutions, to cope with the problem of non-omniscient people, constitutes the second part of robust political economy (Read, 1958; Mises, 2007[1955]; or Hayek, 1945 and 1979[1952]).

On the importance of institutional environments for encouraging the right types of productive entrepreneurship, and thus growth, see Mises, 1998[1949]; Baumol, 1990; Harper, 2003; Holcombe, 1998; Rosenberg, 1960a; Kirzner, 1973 and 1997; or deSoto, 2000. More generally, the literature on the importance of sound institutional environments is also abundant (see, e.g. Rosenberg, 1960b; North and Weingast, 1989; Jensen and Meckling, 1979; Scully, 1992 and 1988; Jensen and Meckling, 1979; Holcombe, 1998; Coyne and Leeson, 2004; or Boettke and Coyne, 2003). Finally, studies have offered conclusive empirical evidence of the strong link between sound institutional environments and economic growth and prosperity (e.g. Gwartney *et al.*, 2016).

Microeconomic Effects of Girls' Education on Marriage and Health

The focus of much of Easterly's work is macroeconomic. Easterly (2001) searches for evidence of the impact of education in macroeconomics measures (predominantly GDP). Many of the effects, however, manifest themselves on a microeconomic scale, predominantly within the family. Educated girls and the women they become have more favorable experiences in the home, starting with marriage.\

One third of girls in developing nations are married before the age of eighteen, and one-seventh of girls are married before the age of fifteen (<http://www.popcouncil.org/research>). Early marriage is often associated with early age at first childbirth, which often occurs before development is complete. Adolescent childbearing bears significant risk. For girls aged 15-19, complications during pregnancy and childbirth are the leading cause of death (World Health Organization, 2015; see also Neal *et al.*, 2012). The World Health Organization (2016) reports that "adolescent mothers (ages 10–19 years) face higher risks of eclampsia, puerperal endometritis, and systemic infections than women aged 20 to 24 years, and babies of adolescent mothers face higher risks of low birth weight, preterm delivery and severe neonatal conditions."

Early marriage also results in skewed power dynamics within the household. Traditional child marriage in many cultures involves an older

man taking a child bride (see UNICEF, 2015). It is also common for a child bride to be a second or third wife in a polygamous marriage, and older husbands and their wives are more empowered to exercise control over child brides. Women in polygamous marriages are more likely to suffer physical and sexual violence (Kimuna, 2008). Women who get married young, especially those who marry much older men, are usually less capable of asserting themselves or establishing firm positions in a household. These girls have less agency, autonomy, status, and power in the household. They are also more likely to be raped or physically assaulted by their husbands (Kimuna, 2008.)

The negative consequences of child marriage are broad and far-reaching. If child marriage is the root of so many sources of suffering for families in the developing world, it would be wise for development economists to seek the abolition of the practice. Lest we be accused of top-down imposition of "Western" norms, we return to the classical liberal tradition. Locke (1988) and Mill (1978[1959]) along with almost all thinkers in this tradition, argued that children constitute exceptions to a scheme of full liberty. Children lack intellectual and moral autonomy – including the autonomy to enter into a marriage contract.³

Many have advocated a policy-based approach for the abolition of child marriage. In accordance with this mindset, anti-child marriage legislation is enshrined in prominent human rights doctrine, including the Convention on the Rights of the Child and the Convention on the Elimination of All Forms of Discrimination Against Women. The Convention on the Rights of the Child was signed by every UN Country except for Somalia and the United States, and the Convention on the Elimination of All Forms of Discrimination Against Women was ratified by every country except Iran, Palau, Somalia, Sudan, Tongo, and the United States. This means that 19 out of the 20 countries with the highest rates of child marriage officially recognize the practice as a violation of human rights. It also suggests that a policy-based approach may have limited success.

The failure of policy to prevent child marriage can be explained using Easterly's incentive-based model. Poor parents with limited means to feed

³ All but the most radical anarcho-capitalists accept state restrictions on child marriage, as part of the state's defense of individual rights. Anarcho-capitalists would rely on emergent norms to protect the rights of those who are not yet capable of moral agency, while allowing those children who demonstrate moral agency to be fully free (Rothbard, 1998, chapter 14). But this is a philosophical aside for another context.

their children have an incentive to pass responsibility for their nutrition to others. Because the marriage of a daughter acts as a transfer of legally held property, it can be used to generate capital and reassign responsibility. In societies that practice bride price, younger girls fetch a higher price due to their ability to be manipulated and increased chance of virginity. These reasons create incentives for parents to ignore the law, and to bribe corrupt law enforcement officers to look the other way.

Policy measures thus far have largely failed to liberate girls from forced child marriage. Education, however, can dramatically influence a girl's age at first marriage and thus consequently vastly improve the quality of her life; indeed, female education is a protective factor against child marriage. Demographic and Health Survey data from 20 countries with the highest prevalence of child marriage reveal that girls' schooling is the most important factor associated with age at marriage (Gupta *et al.*, 2008). When UNICEF conducted a study of 42 countries, it found that young women with some primary school education were "significantly less likely" to be married before the age of eighteen than were their uneducated peers (Jejeebhoy and Halli, 2006; UNICEF, 2005; see also Ikamari, 2005).

The effects of primary school, as summarized above, are significant. The effects of secondary school, however, are even more encouraging (see Gupta *et al.*, 2008). The World Fertility Survey found that women with at least seven years of education got married four years later than similar illiterate girls (Jejeebhoy, 1995; see also UNICEF, 2005, 6 and UNDESA, 1997, C2).

The effects of educating girls on decreasing the prevalence of child marriage are also seen on an intergenerational level, indicating a compound interest of sorts. Girls with literate mothers have a significantly lower probability of being engaged or married before the age of 18 (see Johnson-Lans, 2008). Increases in primary and secondary school enrollment decrease the prevalence of child marriage, which in turn indirectly mitigates the negative effects of early marriage and early childbearing. Increases in enrollment also directly mitigate many of the symptoms of early marriage and childbearing. When compared with illiterate mothers, educated mothers experience lower rates of infant mortality and malnourishment (Sandiford *et al.*, 1995, 12). Literate women enjoy more bargaining power in the home. Literate women are empowered to limit family-size, provide food and financial support for the family, prioritize their daughters, and to discourage the early marriage of their daughters (Johnson-Lans, 2008, 18). Women who

are educated are also more likely to vaccinate their children (Ahmad *et al.*, 2013).

Educating women begins a virtuous cycle of education that persists over generations; "better educated women have higher aspirations for their children's education and are less likely to expect labour support from their school-going children than are uneducated women" (Jejeebhoy, 1995, 3). In a 2005 study of 951 women and 1,000 adolescent girls, it was found that having a literate mother led to a 14% increase in the likelihood that the daughter would be literate (Johnson-Lans and Kamdar, 2005; see also Chudgar, 2009; for a case study on the positive correlation between educated mothers and the school attendance of children, see Kamanda, Madise and Schnepf, 2016).

From Micro to Macro: The Meso-Economic Girl Effect

If the only effect of education were that it pushed back age of first marriage, and the goal of international development theory and policy is to improve quality of life, then the outcomes would more than justify the investment. However, that this is only the beginning.

If women are empowered and skilled, they can contribute to their economies in a more complete manner. They can harness their human capital to create technology, engineer solutions, generate capital, impart knowledge, lead revolutions, and save lives. The advancements in Western technology, medicine, and science contributed by women have vastly improved quality of life around the world. The empowerment of women in the developing world could result in incredible technological advancements.

The cost of the exclusion of women from political and economic processes can be deduced from the Austrian Knowledge Problem: knowledge is based in experience, and because each individual in a society has a unique experience, each individual in a society has unique knowledge. Women have different experiences than men, even in societies with high levels of gender equality, because women are biologically different from men. These differences can include differing opportunity costs relating to family life and reproductive life, but can also include different experiences in cultural or institutional frameworks. If women (or any systematically disenfranchised group) have unique knowledge rooted in experience that is not being incorporated into the legal, institutional, or economic framework of a society because of oppression, that society experiences the negative

effects of the knowledge problem. If half the population of any society is hindered from contributing its unique knowledge, the society suffers from an artificial shortage of knowledge (generally, see Hayek, 1945).

Furthermore, empowered women can change the systems that hinder economic growth. If systemic, institutional change is to be enacted, and if this change is a prerequisite for development (as Easterly and the New Development Economics show), then the empowerment of members of a disenfranchised members of a society can be an effective vehicle for reform. This abstract, theoretical extrapolation can have real-world effects. If the needs of women are unvoiced, nothing can be done to help them. If women are unable to protest unjust practices, and men have an incentive to perpetuate them, the unjust practices will continue. For instance, if the law prohibits a woman from asking for a divorce, men are able to contribute less marital output (or engage in abusive behavior) because there is no mechanism by which wives can discourage this behavior (*e.g.* divorce or threat of divorce). If the law states that only men can own property, men in power have a strong incentive to perpetuate the status quo. These are just two examples of legal institutions that could be challenged by women in government, and are perpetuated through the disenfranchising of women (see Taylor-Robinson Heath, 2003).

The McKinsey Global Institute found that lack of global gender parity could cost the global economy \$28 trillion dollars by 2025 (Woetzel *et al.*, 2015). This gender parity opportunity cost is based on their Gender Parity System (GPS,) which identifies five global zones that inhibit women's participation in the global economy: blocked economic potential, unpaid work, inequality in legal rights, political under-representation, and violence against women. Regional inhibitions include low labor-force participation in quality jobs, low maternal and reproductive health, and unequal access to education. It is this final blockade, unequal access to education, which perpetuates these regional failures. Furthermore, unequal access to education inhibits women from creating systemic change in political and economic institutions that inhibit economic growth.

What is to be done? We outline here three avenues; the first two have to do with the state actually fulfilling its duty to protect the rights of individuals (in this case, girls and women), in its role of "protective state" (see Buchanan, 2000[1975]). The third has to do with the specific economic leverage of investing in girls and women.

The Protective State (1): Girls' Education and Women's Rights

One case in which the empowerment of women can lead to institutional reform is in differences in policy pursued by male and female politicians. Female politicians place a higher priority on women's rights legislation than do their male colleagues (Robinson and Heath, 2003). This is to be expected, as women have an incentive to protect their own rights. Female politicians are often more frequent participants in the debate of bills involving family issues and the rights of women and children. Because they are speaking up in legislative debate, they are contributing their unique knowledge and experience to the formation and alteration of legislation, thereby improving the quality of the work.

The Protective State (2): Removing Economic Barriers for Women

Institutional reform is a prerequisite for growth. Institutions such as property law, inheritance law, and regulation may disadvantage women entrepreneurs, thus hindering their production. If women are unable to own capital and earn returns from it, they are limited in their ability to generate profit or continue production. If inheritance law bans women from receiving an inheritance from their parents, or their deceased husbands, women have limited access to start-up capital. If regulation creates significant barriers to entry, which are un navigable to the uneducated, then women will bear the brunt of the cost because they are less likely to be educated. In fact, two-thirds of the world's illiterate population is female: if barriers to entry prohibit the illiterate from formal activity, women will bear a disproportionate fraction of the cost.

Investing in Girls and Women: Higher Returns on Investment

We have already seen the economic returns to women's economic development and the protection of individual rights. What of investment in women specifically?

The Grameen Bank, whose founder Muhammad Yunus started micro-lending, focuses its lending on women (more than 95%), for five reasons: because (1) women make better use of small loans than men; (2) women have a better track record of repayment than men; (3) women are a huge untapped labor pool; (4) loans to women increase their access to capital; and (5) women who receive loans adopt healthier lifestyles and improve the

economic status of their families (see Esty, 2013 or Yunnus, 2008). Several other studies corroborate the Grameen experience. McCarter (2006) notes that "Women make up approximately eighty-three percent, or sixty-six million, of reported microfinance clients. They not only make good clients – women have proven better at paying on time than men – but are also key drivers of development." In sum, "investing in women, literally, has proven the most effective way to increase individual family expenditures on health and education, improve nutrition and food security, protect against emergencies, and begin the slow process of tackling the gender inequalities that hinder development in so many countries around the world." A study by Price Waterhouse Coopers (2014) finds that "on average, women invest 90% of their income on their families, investing in the education of their children and the healthcare of their relatives. And the OECD (2010) reports that "women usually invest a higher proportion of their earnings in their families and communities than men."

What Can We Do? What Works? A Case Study from Senegal

Those familiar with *The Elusive Quest For Growth* will remember the feelings they experienced while reading Easterly's evaluation of the impact of education in the developing world (Easterly, 2001). Easterly sees educating those trapped in a struggling economy as a Sisyphean effort: no matter how many resources or how much effort is exerted in education, a failed institutional structure will drag the stone back down the hill. The good news comes from one significant exception: education changes the lives of girls, and the lives of the families those girls will create one day.

Tostan: A Senegalese Educational Initiative

It is one thing to explore the relationship between education and girls' lives through statistics, but another entirely to explore case studies that illustrate just how powerful this impact can be. One such case study is the success of Tostan, a Senegalese educational initiative.

Tostan was founded in 1991 by American expatriate Molly Melching (www.tostan.org). The program began with Melching teaching people in the rural village of Saam Njaay to read and write their native tongue. The informal structure of Melching's classes made them accessible to those who had been excluded from the French-speaking education system. The curriculum and scope of Tostan expanded rapidly in the 1990s. The final

curriculum included units on problem-solving, health and hygiene, preventing child mortality, financial management, leadership and group dynamics, conducting feasibility studies for proposed income-generating projects, literacy, numeracy, democracy, and human rights.

Women in Saan Njaay were empowered by Tostan. Lessons on health and germ theory taught them how to protect themselves and their children from contaminated water. They began to learn things about their bodies that we take for granted, including why they menstruated and why washing their hands was important. They strengthened their relationships with the families that they had left when they married, since Senegalese marital norms include patrilocality. They joined with the men to advocate to be included in a project to provide safe drinking water to participating villages. Together, they organized a wood lot to cut down the amount of time needed to gather wood daily, and built clay-and-sand stoves to reduce the need for wood, thereby freeing more time for schooling. A health center was built by the villagers. A community garden was built and tended for more than thirty years. The village flourished.

The most astounding success of Tostan was unforeseen by Melching, and resulted from the curricula involving health and human rights. Women were beginning to learn that they had rights. These rights were recognized (if not fully secured) by international human rights treaties including the International Covenant on Civil and Political Rights; the International Covenant on Economic, Social, and Cultural Rights; the Declaration on the Elimination of Violence Against Women; and the Convention on the Elimination of All Forms of Discrimination Against Women. These treaties were ratified by the Senegalese government, and thus applied to these women, who had been told forever that their only right was the right to be a dutiful wife and daughter. They had the right not to be beaten by their husbands. They had the right not to be raped, or killed because of dowry, or married against their will. They had the right to control their own bodies, and to practice family planning. They had autonomy over their own bodies.

To put this change in perspective, remember that unless American citizens are organ donors, their organs cannot be used for transplants. Without consent given while Americans are alive, their organs cannot be used to save the lives of those in need. American corpses have bodily autonomy. Conversely, the Tostan women were born belonging to their fathers, and died belonging to their husbands or their sons. Their bodies could be used, bruised, and abused without their having the right to deny the

touch of any man. Senegalese women were never taught that their bodies belonged to them. These living, breathing women had less bodily autonomy than American corpses.

The women of Malicounda Bambara, another Tostan village, made the decision first. They had learned that they had rights, and they had once discussed a practice known to them as "the Tradition," also known as female genital cutting (FGC). The practitioners of the "Tradition" discussed it in hushed tones by soft firelight, for the first time. They remembered the girls they had lost, the blood that was shed. Culture dictates that they never discuss the "Tradition," for fear of invoking the curse of bad spirits. They had been told that the bad spirits were the reasons girls died after they had been cut, but they now knew that blood loss and infection had taken their sisters and daughters. After discussion and reflection, the women of Malicounda Bambara told Melching that they were choosing to end FGC in the village.

The villagers of Malicounda Bambara held each other accountable for the decision they had reached as a group. Village representatives travelled to other villages with which they inter-married, to tell them they had abandoned the practice and that their sons would no longer marry girls who had been cut. Public statements of abandonment were made in hundreds of villages throughout the Kolda and Thiès regions. On February 14, 1998, representatives from 13 villages, representing 8,000 Senegalese citizens, made a joint declaration that they were following the precedent set by Malicounda Bambara. This effectively changed the marriage markets for these villages and intermarrying neighbors: the collective decision reversed the incentive structure that perpetuated FGC (Easton, Monkman, and Miles, 2003.) Today, more than 1,600 villages have collectively decided to abandon FGC, representing 30% of the practicing population (UNICEF, 2005.)

Diop and Askew (2009) conducted studies in the Kolda region, comparing similar villagers who had or had not participated in the Tostan program, almost twenty years after the first public declaration of abandoning FGC. They found that "the proportion of women who believe that [FGC] is a social necessity decreased significantly among women in the intervention villages, from 70 percent at baseline to 15 percent among participants and 29 percent among non-participants. In the intervention group, the baseline for women who would have their daughters cut was 71%. At endline 18 months later, it was 12%."

While FGC still exists in Senegal, its prevalence is declining and attitudes about it are changing. Every day, girls who would have been cut just two decades ago are growing up intact and living healthier, more productive lives. As people are being empowered through education, they are applying critical analysis to previously taboo aspects of their lives. They are becoming key decision makers, and experiencing autonomy for the first time. Education is not changing their GDP (yet), but it is changing their relationships with their culture, their families, and themselves.

The Tostan Approach

The foundation for the success of Tostan was its bottom-up approach to empowerment through education. It employed local traditions and learning styles by incorporating drama and storytelling, elements which are intrinsic to Senegalese culture. It used existing social capital to incorporate members of the community not enrolled in the program, through requiring that Tostan students begin dialogues with their peers outside the program about the material they were covering. Lessons were delivered in the local language, Wolof, rather than the colonial French. The program is largely administered and delivered by Senegalese members of the communities they served; for many years, Melching was the only American on staff. Lessons took place in the community during the evenings, thereby respecting the workloads of the students. Community efforts decreased the need for time-consuming travel to gather water and firewood. Local knowledge was used to create a curriculum that incorporated the skills and experiences of participants, respecting the Austrian knowledge problem. Lessons were held inside the community, rather than in remote destinations that would strain attendance. Finally, the community center where lessons were held was used to distribute medications to mitigate the effects of disease on the ability to learn.

The methods that make Tostan a successful program are absent from traditional education in many developing countries. Major problems plaguing education in these countries include a language barrier, teacher absenteeism, distance, lack of supplies, and rote memorization instruction. Easterly (2001) was right to critique the quality and impact of education in developing nations: most educational institutions in the developing world deliver low quality education with limited success. Tostan is proof that education can be successful, if executed correctly, and creates a prototype for further projects (see Easterly, 2006; see also Tooley, 2013 or Dixon,

2013 on educating the poorest, through private efforts, where the state has failed).

Conclusion

While Easterly's work is revolutionary and worthy of attention; only at the margin is it incomplete, due to the absence of a gender-based dehomogenization of education. Easterly's willingness to confront the limited effectiveness of aid spending is a lesson for all development professionals (see Easterly, 2001 or Lal, 2000). In the spirit of Mises (2007[1955]), and despite the widespread failures of development economics and policy, we assume that most people who go into development work do so out of a genuine desire to improve the lives of people in developing nations.⁴ Because of this desire, it is tempting for those in the aid world to conclude that anything helps – or worse, boldly to persevere with perfect plans that fail. Easterly's challenge reminds us of the most basic tenet of economics: resources are scarce. Because of this scarcity, it is vital to the future of development that ineffective and inefficient practices be abandoned. The need is too great for waste. Furthermore, Easterly's work calls our attention to a huge roadblock in the way of effective development: unsound institutions. Unsound institutions inhibit growth. They permit kleptocratic authoritarians to siphon off aid contributions to pay off allies and assure patronage; they also promote stagnation, as political activity is rewarded over economic activity. Unsound institutions limit the abilities of women to own businesses and extract capital.

Institutional change, however, can be made only by those on the inside. Efforts by exterior powers demanding institutional reform will be ineffective (see Boettke *et al.*, 2008). The demand for institutional reform as part of acceptance of financial aid is coercive and cannot lead to the establishment of culturally sound institutions. Only those who grow up in a culture can truly understand the dynamics that must be accounted for in the creation of effective institutions, and these people can only apply their unique cultural knowledge to institutional reform if they are given the tools to do so, namely education and empowerment. If the goal of the New

⁴ Contra Hancock (1994), who looks at the (theoretical) incentive problem and the (actual) corruption of the development industry.

Development Economics is institutional reform, then the education of girls must be pursued as a route towards reform.

There is no panacea for economic development. There is, however, a virtuous cycle that can be exploited to improve health, wealth, and institutions. The first step towards instituting this virtuous cycle is to empower and educate girls.

We must, however, close on a cautionary note. We have argued here that education for girls is an exception to the rule that education (in general) does not lead to growth, absent institutional change. This does certainly *not* imply that we are arguing for top-down, state-run, centrally planned, government-to-government programs that ignore the local reality, and arguably do more harm than good (see Bauer, 1972 and 2000, Hancock, 1994, Coyne, 2013, or Easterly, 2014). Instead, we argue for targeted private programs that respect basic microeconomics (including incentives and local knowledge). Beyond the case study we present, see for example the pioneering work of James Tooley (2013) or Pauline Dixon (2013), who describe immensely successful, private, grassroots, bottom-up programs that educate poor children (see also Easterly, 2006 and 2014).

Acknowledgments

For feedback and insights, the authors thank participants at the 2016 meeting of the Association of Private Enterprise Education. The usual disclaimer applies.

References

- [1] **Ahmad, Samreen, Shahzada Bakhtyar Zahid and Anwar Zeb Jan.** 2013. "The Impact of Parental Education and Socioeconomic Status on Routine Childhood Vaccination: An Observational Study." *Journal of Postgraduate Medical Institute* 27(3).
- [2] **Bastiat, Frederic.** 2012[1850]. *The Law*, New York: Tribeca Books.
- [3] **Bauer, P.T.** 1972. *Dissent on Development*, Cambridge: Harvard University Press.
- [4] **Bauer, P.T.** 2000. *From Subsistence to Exchange*, Princeton: Princeton University Press.
- [5] **Baumol, William.** 1990. "Entrepreneurship: Productive, Unproductive and Destructive." *Journal of Political Economy*, Vol. 98, No. 5, Part 1, Oct. 1990, 893-921.

- [6] **Boettke, Peter and Christopher Coyne.** 2003. "Entrepreneurship and Development: Cause or Consequence?" in Koppl, Roger, Birner, J. and Kurrild-Klitgaard, Peter (editors). 2003. *Austrian Economics and Entrepreneurial Studies (Advances in Austrian Economics, Vol. 6)*, Bingley: Emerald Group Publishing Limited, 67-87.
- [7] **Boettke, Peter, Christopher Coyne, and Peter Leeson.** 2008. "Institutional Stickiness and the New Development Economics." *American Journal of Economics and Sociology*, 2008, 67(2): 331-358.
- [8] **Birchler, Kassandra and Katharina Michaelowa.** 2016. "Making Aid Work for Education in Developing Countries: An Analysis of Aid Effectiveness for Primary Education Coverage and Quality." *International Journal of Educational Development*, Volume 48.
- [9] **Buchanan, James M.** 2000[1975]. *The Limits of Liberty: Between Anarchy and Leviathan*, in *The Collected Works of James M. Buchanan*, Volume 7. Indianapolis: Liberty Fund.
- [10] **Buchanan, James M. and Gordon Tullock.** 1962. *The Calculus of Consent: Logical Foundations of Constitutional Democracy*. Ann Arbor: University of Michigan Press.
- [11] **Chudgar, Amita.** 2009. "The Challenge of Universal Elementary Education in Rural India: Can Adult Literacy Play a Role?" *Comparative Education Review* 53(3), 403-433.
- [12] **Coyne, Christopher.** 2013. *Doing Bad by Doing Good: Why Humanitarian Action Fails*. Redwood City, CA: Stanford University Press.
- [13] **Coyne, Christopher and Peter Leeson.** 2004. "The Plight of Underdeveloped Countries." 24 *Cato Journal*, Vol. 24, No. 3.
- [14] **De Soto, Hernando.** 2000. *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*. New York: Basic Books.
- [15] **Diop, Nafissatou J. and Ian Askew.** 2009. "The Effectiveness of a Community-based Education Program on Abandoning Female Genital Mutilation/Cutting in Senegal." *Studies in Family Planning* 40(4), 307-318.
- [16] **Dixon, Pauline.** 2013. *International Aid and Private Schools for the Poor: Smiles, Miracles and Markets*. Cheltenham, UK and Northampton, MA: Edward Elgar.
- [17] **Dopfer, Kurt, John Foster and Jason Potts.** 2004. "Micro-meso-macro." *Journal of Evolutionary Economics*, vol. 14(3), 263-279.
- [18] **Easterly, William.** 2001. *The Elusive Quest for Growth: Economists' Adventures and Misadventures in the Tropics*. Cambridge, MA: MIT Press.
- [19] **Easterly, William.** 2006. *The White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good*. New York: Penguin Books
- [20] **Easterly, William.** 2014. *The Tyranny of Experts: Economists, Dictators, and the Forgotten Rights of the Poor*. New York: Basic Books

-
- [21] **Easton, Peter, Karen Monkman and Rebecca Miles.** 2003. "Social Policy from the Bottom up: Abandoning FGC in Sub-Saharan Africa." *Development in Practice* 13(5), 445-458.
- [22] **Esty, Katherine.** 2013. *Twenty Seven Dollars and a Dream: How Muhammad Yunnus Changed the World and What it Cost Him*, Katherine Esty Company
- [23] **Gupta, Sreela, Sushmita Mukherjee, Sampurna Singh, Rohini Pande and Sharmishtha Basu.** 2008. "Knot Ready: Lessons from India on Delaying Marriage for Girls." Washington, DC: International Center for Research on Women.
- [24] **Gwartney, James, Robert Lawson, and Joshua Hall.** 2016. *Economic Freedom of the World: 2016 Annual Report*. Vancouver, BC: Fraser Institute
- [25] **Gwartney, James, Richard Stroup, Russel Sobel and David Macpherson.** 2005. *Economics: Private and Public Choice*, 11th edition, Cengage Learning
- [26] **Hancock, Graham.** 1994. *The Lords of Poverty: The Power, Prestige and Corruption of the International Aid Business*. New York: Atlantic Monthly Press
- [27] **Harper, David.** 2003. *Foundations of Entrepreneurship and Economic Development*. New York: Routledge.
- [28] **Hayek, F.A.** 1945. "The Use of Knowledge in Society." *The American Economic Review*, 35 (4): 519-30
- [29] **Hayek, F.A.** 1979[1952]. *The Counter-Revolution of Science: Studies on the Abuse of Reason*. Indianapolis: Liberty Fund.
- [30] **Heyneman, Stephen, and Bommi Lee.** 2016. "International Organizations and the Future of Education Assistance." *International Journal of Educational Development*, Volume 48.
- [31] **Holcombe, Randall.** 1998. "Entrepreneurship and Economic Growth." *Quarterly Journal of Austrian Economics*, Vol. 1, No.2 (Summer 1998), 45-62.
- [32] **Ikamari, Lawrence.** 2005. "The Effect of Education on the Timing of Marriage in Kenya." *Demographic Research* 12(1), 1-28.
- [33] **Ikeda, Sanford.** 2003. "How Compatible Are Public Choice and Austrian Political Economy?" *Review of Austrian Economics* 16:1, 63-75.
- [34] **Jejeebhoy, Shireen.** 1995. *Women's Education, Autonomy, and Reproductive Behaviour: Experience from Developing Countries*. Oxford: Clarendon Press.
- [35] **Jejeebhoy, Shireen, and Shiva Halli.** 2006. "Marriage Patterns in Rural India: Influence of Sociocultural Context." In *The Changing Transitions to Adulthood in Developing Countries: Selected Studies*, ed. Cynthia Lloyd, Jere Behrman, Nelly Stromquist, and Barney Cohen, 172-199. Washington, DC: National Academies Press, 172-199.

- [36] **Jensen, Michael and William Meckling.** 1979. "Rights and Production Functions: An Application to Labor-Managed Firms and Co-Determination." *Journal of Business* 52 (Oct. 1979), 469-506.
- [37] **Johnson-Lans, Shirley.** 2008. "Do NGOs Make a Difference? A Case Study of Rural Rajasthan." Vassar College Working Paper.
- [38] **Johnson-Lans, Shirley and Shweta Kamdar.** 2005. "Effects of Female Literacy in Villages in Rural Rajasthan," Vassar College Working Paper.
- [39] **Kamanda, Mamusu, Nyovani Madise and Sylke Schnepf.** 2016. "Does Living in a Community with More Educated Mothers Enhance Children's School Attendance?" *International Journal of Educational Development*, Volume 48.
- [40] **Kimuna, Sitawa.** 2008. *Final Report on Support for Reproductive Health and Gender Needs for Displaced Populations with Special Attention to Adolescents 2001-2006.* New York: United Nations Population Fund.
- [41] **Kirzner, Israel.** 1973. *Competition and Entrepreneurship.* Chicago: University of Chicago Press.
- [42] **Kirzner, Israel.** 1997. "Entrepreneurial Discovery and the Competitive Market Process: An Austrian Approach." *Journal of Economic Literature*, Vol. 35, No. 1, Mar. 1997, 60-85.
- [43] **Klein, Daniel.** 2005. "The People's Romance: Why People Love Government (as Much as They Do)," *The Independent Review*, v. X, n. 1, Summer 2005.
- [44] **Lal, Deepak.** 2000. *The Poverty of Development Economics.* Cambridge, MA: MIT Press.
- [45] **Leeson, Peter and J. Robert Subrick.** 2006. "Robust Political Economy." *Review of Austrian Economics*, 19:107-111.
- [46] **Locke, John.** 1988. *Two Treatises of Government.* Cambridge, UK: Cambridge University Press.
- [47] **McCarter, Elissa.** 2006. "Women and Microfinance: Why We Should do More." *University of Maryland Law Journal of Race, Religion, Gender and Class*, Vol 6:353.
- [48] **Mill, John Stuart.** 1978[1959]. *On Liberty.* Indianapolis and Cambridge: Hackett Publishing Co.
- [49] **Mises, Ludwig von.** 1990[1920]. "Economic Calculation in the Socialist Commonwealth." Auburn, AL: Ludwig von Mises Institute.
- [50] **Mises, Ludwig von.** 1998[1949]. *Human Action: A Treatise on Economics.* The Scholar's Edition, Auburn, AL: Ludwig von Mises Institute.
- [51] **Mises, Ludwig von.** 2007[1955]. *Economic Policy: Thoughts for Today and for Tomorrow.* Auburn, AL: Ludwig von Mises Institute.
- [52] **Neal Sarah, Zoe Matthews, Melanie Frost, Helga Fogstad, Alma V. Camacho, and Laura Laski.** 2012. Childbearing in Adolescents Aged 12–15 Years in Low Resource Countries: A Neglected Issue. New Estimates

- from Demographic and Household Surveys in 42 Countries. *Acta Obstetricia et Gynecologica Scandinavica*, 91: 1114–18.
- [53] **North, Douglass and Barry Weingast.** 1989. "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England," *Journal of Economic History*, 49:803-32.
- [54] **OECD (2010)**, Investing in Women and Girls: The Breakthrough Strategy for Achieving All the MDGs," <https://www.oecd.org/dac/gender-development/45704694.pdf>
- [55] **Olson, Mancur.** 1982. *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities*. New Haven: Yale University Press.
- [56] **Pennington, Mark.** 2011. *Robust Political Economy: Classical Liberalism and the Future of Public Policy*. Cheltenham, UK and Northampton, MA: Edward Elgar.
- [57] **Price Waterhouse Coopers (2014)**, "Unlocking the Potential: Investing in Women and Girls." London: Price Waterhouse Coopers.
- [58] **Read, Leonard.** 1958. "I, Pencil: My Family Tree as Told to Leonard Read." Irvington-on-Hudson: Foundation for Economic Education.
- [59] **Riddell, Abby and Miguel Niño-Zarazúa.** 2016. "The Effectiveness of Foreign Aid to Education: What Can Be Learned?" *International Journal of Educational Development*, Volume 48.
- [60] **Rosenberg, Nathan.** 1960a. "Capital Formation in Underdeveloped Countries." *American Economic Review*, Vol. 50, No. 4, Sep. 1960, 706-71.
- [61] **Rosenberg, Nathan.** 1960b. "Some Institutional Aspects of the Wealth of Nations." *Journal of Political Economy*, Vol. 68, No. 6, Dec. 1960, 557-570.
- [62] **Rothbard, Murray.** 1998. *The Ethics of Liberty*. New York: New York University Press.
- [63] **Sandiford, P.J., Cassel, M. Montenegro and G. Sanchez.** 1995. "The Impact of Women's Literacy on Child Health and its Interaction with Access to Health Services." *Population Studies* 49,5-17
- [64] **Scully, Gerald.** 1988. "The Institutional Framework and Economic Development." *Journal of Political Economy*, Vol. 96, No. 3, Jun. 1988, 652-662.
- [65] **Scully, Gerald.** 1992. *Constitutional Environments and Economic Growth*. Princeton: Princeton University Press.
- [66] **Scully, Gerald.** 2002. "Economic Freedom, Government Policy and the Trade-Off Between Equity and Economic Growth." *Public Choice* 113:1, 77-96.
- [67] **Stroup, Michael.** 2011. "Does Economic Freedom Promote Women's Well-Being?," in Gwartney, James, Robert Lawson, and Joshua Hall. *Economic Freedom of the World: 2011 Annual Report*. Vancouver, BC: Fraser Institute.

- [68] **Taylor-Robinson, Michell and Roseanna Heath.** 2003. "Do Women Legislators Have Different Policy Priorities than Their Male Colleagues? A Critical Case Test." *Women and Politics* 24(4), 77-101.
- [69] **Tooley, James.** 2013. *The Beautiful Tree: a Personal Journey into how the World's Poorest People are Educating Themselves.* Washington, DC: Cato Institute.
- [70] **Tullock, Gordon.** 1967. "The Welfare Costs of Tariffs, Monopolies and Theft." *Western Economic Journal* 5, 224-232.
- [71] **Tullock, Gordon.** 1975. "The Transitional Gains Trap." *The Bell Journal of Economics*, Vol. 6, Issue 2, 671-678.
- [72] **UNICEF, Annual Reports.** 2005, 2015. New York: UNICEF.
- [73] **United Nations Department of Economic and Social Affairs (UNDESA).** 1997. "1997 Report on the World Social Situation: Social Development," New York: UNDESA.
- [74] **Woetzel, Jonathan, Anu Madgavkar, Kweilin Ellingrud, Eric Labaye, Sandrine Devillard, Eric Kutcher James Manyika, Richard Dobbs, and Mekala Krishnan.** 2015. "The Power of Parity: How Advancing Women's Equality Can Add \$12 Trillion to Global Growth." London, San Francisco and Shanghai: McKinsey Global Institute.
- [75] **World Health Organization.** 2015. *The Global Strategy for Women's, Children's and Adolescents' Health (2016-2030).* Geneva: World Health Organization.
- [76] **World Health Organization.** 2016. Global health estimates 2015: deaths by cause, age, sex, by country and by region, 2000–2015. Geneva: World Health Organization.
- [77] **Yunus, Muhammad.** 2008. *Banker to the Poor: Micro-Lending and the Battle Against World Poverty.* New York: Public Affairs.

Article history: Received: 03 February, 2020

Accepted: 14 May, 2020