

# What Expansion of Mandatory Schooling Can and Cannot Do in Conservative Muslim Societies

Erik Meyersson, SITE  
April 2014

*New research shows expanding mandatory schooling in conservative Muslim societies have broad positive effects on female empowerment but is not enough to overcome the significant barriers to female entry in the labor force.*

Does expansion of public education empower women? A large literature documents the positive effects of education on women's economic and social outcomes in developed countries, but we know less about its causal effects on women's empowerment in Muslim societies where women's participation in the labor market is limited and they often do not have control over their earnings or their own bodies (Doepke et al 2012). In fact, even though female education has been successfully expanding in many majority-Muslim countries, the number of legal rights enjoyed by women is few relative to men, and female labor-force participation remains low (UNDP 2005). The lack of a corresponding labor-force participation effect raises concerns over the efficacy of expanding education as a means of improving women's rights in Muslim societies. On the other hand, education has been shown to have many important non-pecuniary effects outside the labor market, such as in health, marriage, and parenting style (Oreopolous and Salvanes 2011) and to the extent that these effects help empower women, they may constitute alternative mechanisms through which education may lead to women's

empowerment (even in the absence of large labor market returns). However, most of this research comes from countries and societies that are not majority-Muslim and where women do work to a larger degree. As such, disentangling non-pecuniary returns to education from its labor market (and thus pecuniary) returns is particularly challenging in most settings and whether education may empower women in the Muslim world remains an open question.

Even though scholars debate the fundamental causes for the severe degrees of gender inequality in Muslim societies, most posit a nexus of patriarchal culture, strong religious values, and restricting social norms as proximate explanatory factors. Historically, Lewis (1961) claims women's status was "probably the most profound single difference" between Muslim and Christian civilizations. In more contemporary cross-country studies, Fish (2002) documents a negative cross-country correlation between having an "Islamic religious tradition" and female empowerment, while Barro and McCleary (2006) also show that Muslim countries tend to exhibit higher degrees of

religious participation and beliefs. Comparing the effects of a business training program on female entrepreneurship among Hindu and Muslim women in India, Field et al (2010) find evidence in line with significantly stricter constraints to female labor-force participation among Muslim women. To the extent that barriers to entry due to religious values restrain women's rights, an integral outcome of empowerment is therefore a woman's ability to independently assert her own beliefs.

In a recent paper, Selim Gulesci and I exploit an extension of compulsory schooling in Turkey to estimate the causal effect of schooling on female empowerment (Gulesci and Meyersson 2014). Compulsory schooling laws have been extensively used to estimate returns to education in Western countries on labor market outcomes (Angrist and Krueger, 1991, Oreopoulos 2006), health and fertility (McCrary and Royer 2011, Lleras-Muney 2005, Black et al 2008) among others. We follow a similar strategy to provide meaningful causal parameters for the effect of a year of schooling on outcomes related to social status of women in Turkey, a majority-Muslim country.

In 1997, Turkey's parliament passed a new law to increase compulsory schooling from 5 to 8 years. By this law, individuals born on or after September 1986 were bound to complete 8 years of schooling, whereas those born earlier could drop out after 5 years. Using the sample of ever-married women from the 2008 Turkish Demographic Health Survey (TDHS) we are able to observe outcomes 10 years after the law change was implemented.

We adopt a regression discontinuity (RD) design assigning treatment based on whether an individual's month-and-year of birth was before or after the September 1986 threshold. As such, our identification strategy entails comparing cohorts born one month apart and relies on the assumption that these two groups should exhibit no systematic differences other than being subject to different compulsory

schooling laws. We can thus calculate an RD treatment effect, illustrative of the causal effect of education for individuals born around the threshold.

Analysis of the sample of ever-married women focuses the RD treatment effects on a subset of the population that tends to be demonstratively poorer and more socially conservative, i.e. the very subpopulation that the reform was aimed at. In a comparison of ever- and never-married women, the reform only affected education among the former, and as a result, the exclusion of non-married women effectively means exclusion of non-compliers with the reform. This is a likely consequence of *ex post* single women being more likely to have attended school longer regardless of expanding reforms. We also show that the probability of selection into the married sample is not affected by the law.

Our results are as follow. First, we show the effect of the reform on women's years of schooling. As a result of the reform, women's average years of schooling increased by one year, and completion rates for junior-high (secondary) and high school completion increased by 24 and 8 percentage points (ppt) respectively. There is no significant impact of the reform on men's schooling on average (mainly because the average man's schooling in Turkey around the age threshold was already at a relatively high level). Thus, the reform effectively served to reduce the education gender gap by half.

Second, our RD estimates reveal that this additional year of schooling had significant secularizing effects. Ten years after the reform was implemented, and relative to sample means, women were 10 percent (8 ppt) less likely to wear a headscarf, 22 percent (10 ppt) less likely to have attended a Qur'anic study center and 18 percent (7 ppt) less likely to pray regularly.

Third, we find no evidence of schooling on the timing of either marriage or birth, nor on the

number of children. We do however find significant effects on women's decision rights with regards to both marriage and fertility decisions; a reform-induced year of schooling results in a 10 ppt (20 percent relative to the sample mean) increase in the likelihood of having a say in the marriage decision, and a 10 ppt (12 percent) increase in the likelihood of having a say in the type of contraceptive method adopted. We further find a reducing effect of schooling on the likelihood that a bride price was received by the women's parents from their husband's family upon their wedding.

Fourth, we document less pronounced and largely imprecise impacts on women's labor market outcomes. Although our estimates indicate positive effects on non-agricultural employment in general, and self-employment in particular, these estimates are sensitive to the specification used. At the same time, we show significant positive effects of schooling on household wealth, largely driven by appliances related to women's role as housewives. We are unable to explain this by observable increases in spousal quality, measured as husband's years of schooling.

Altogether, our results indicate significant empowering effects of education, but whereas we document precise effects on decision rights, household wealth, and measures of social and religious conservatism, we fail to find equally concise effects on spousal and labor force outcomes. This prevents an interpretation relying exclusively on either labor market or assortative matching in the marriage market as the main channel of empowerment. In fact, an examination of heterogeneous effects reveal diverging effects depending on how socially conservative women's backgrounds are; in rural areas, education pre-dominantly allows increased freedom to be more secular, greater decision rights over marriage, and less traditional marriages. In urban areas, education has similar effects, but also leads to increased

labor force participation. We interpret this as increased education, and its associated bargaining power in the household, leading to different allocations depending on the preexisting level of women's rights. Education may thus have only a partial effect on employment, as religious or cultural barriers to entry prevent women from realizing larger gains of education through the labor market.

Our paper adds to the research literature by providing meaningful causal parameters for the effect of a year of schooling on both social and religious outcomes for women in a majority-Muslim country. The findings point to a set of returns to schooling that take into context the socially conservative nature of the Turkish society where policies to increase schooling ultimately seem to improve women's status (as captured by higher decision-making power and household wealth) but are unable to meaningfully break down the barriers that women face in entering the labor market, particularly in more conservative rural communities. While still having important empowerment consequences for women's empowerment in Muslim societies, education may not be a magic bullet toward full emancipation. Policies hoping to achieve female empowerment will thus require complementary reforms in health and the labor market to address barriers to entry more directly.

## References

- Denisova, I., and S. Commander, S. Commander and I. Denisova (2012), 'Are skills a constraint on firms? New evidence from Russia', EBRD and CEFIR/NES, mimeo
- Hausmann, R., and Klinger, B., (2007), "The Structure of the Product Space and the Evolution of Comparative Advantage", CID Working Paper No. 146
- Volchkova, N., Output and Export Diversification: evidence from Russia, CEFIR Working Paper, 2011
- Angrist, Joshua D. and Alan. B. Krueger, 1991, "Does Compulsory Schooling Attendance Affect Schooling and Earnings?" Quarterly Journal of Economics, 106(1): 979-1014.

Barro, Robert and Rachel McCleary, 2006, "Religion and Economy", *Journal of Economic Perspectives*, 20(2): 49-74.

Black, Sandra, Paul Devereux, and Kjell G. Salvanes, 2008, "Staying in the Classroom and out of the Maternity Ward? The Effect of Compulsory Schooling Laws on Teenage Births". *Economic Journal*, 118(530): 1025-54.

Doepke, Matthias, and Michelle Tertilt, 2009, "Women's Liberation: What's in it for Men?", *Quarterly Journal of Economics*, 124: 1541-91.

Field, Erika, Seema Jayachandran and Rohini Pande, 2010, "Do Traditional Institutions Constrain Female Entrepreneurial Investment? A Field Experiment on Business Training in India", *American Economic Review Papers and Proceedings*, 100: 125-29.

Gulesci, Selim, and Erik Meyersson, 2014, "For the Love of the Republic – Education, Secularism, and Empowerment", working paper.

Lewis, Bernard, 1961, "The Emergence of Modern Turkey", Oxford University Press: London.

McCrary, Justin, 2008, "Manipulation of the Running Variable in the Regression Discontinuity

Design: A Density Test," *Journal of Econometrics*, 142(2): 698-714.

Lleras-Muney, Adriana, 2005, "The Relationship between Education and Adult Mortality in the United States," *Review of Economic Studies*, 21(1): 189-221.

Oreopolous, Phillip, 2006, "Estimating Average and Local Average Treatment Effects of Education when Compulsory Schooling Laws Really Matter ", *American Economic Review*, 96(1): 152-175.

Oreopolous, Philip and K. G. Salvanes, 2011, "Priceless: The Nonpecuniary Benefits of Schooling", *Journal of Economic Perspectives*, 25(1): 159-184.

UNDP, 2005, "Arab Human Development Report 2005 - Towards the Rise of Women in the Arab World".

## Erik Meyersson

Stockholm Institute of  
Transition Economics (SITE)

Erik.Meyersson@hhs.se  
<http://www.hhs.se/site>



Erik Meyersson is Assistant Professor at the Stockholm Institute of Transition Economics (SITE), and holds a Ph.D. in Economics from the Institute for International Economic Studies (IIES) at Stockholm University.

His main research areas are political economics and development.