Girls’ education and labor market empowerment: What do we know
and what do we need to know?

Dileni Gunewardena, Professor of Economics, University of Peradeniya
dilenig@pdn.ac.lk; dgunewardena@brookings.edu
+94 81 2392622
Department of Economics and Statistics
University of Peradeniya
Peradeniya 20400
SRI LANKA

1. Introduction/Background

Over the last two decades, two key trends are evident in relation to girls’ education and female labor market empowerment. On the one hand, there has been much progress toward achieving gender-parity in primary and secondary education in most regions in the world (Winthrop and McGivney 2014). On the other hand, persistent gender disparities are evident in the labor market.

ILO (World Employment Social Outlook: Trends 2015) reports that the labor force participation rate is 77 percent for men and 50 percent for women. The disparity is even more acute in certain regions. For instance, in South Asia, the corresponding labor force participation rates are 81 and 32 percent, respectively. In Northern Africa, the corresponding figures are 75 and 22 percent. These huge disparities are carried over to employment rates. The unemployment rate in Northern Africa for men is 92 percent, much higher than the 81 percent for women.

In many parts of the world, these disparities have not declined over time. Female labor force participation and female employment as a percentage of population have been stagnant or declining in Central and South Eastern Europe, East Asia, South East Asia and South Asia, though rising (slowly) in Latin America, Middle East and Sub-Saharan Africa and the developed world (ILO 2015).

Stagnant female force participation and employment is evident in countries with high female educational attainments such as Sri Lanka, where female enrolments have long surpassed male enrolments in secondary school and women have recently overtaken men in tertiary education, yet female unemployment has been twice as high as male unemployment (Gunatilaka 2013, World Bank 2013, Gunewardena et al 2009).

Labor force participation and employment are low even among younger females, who could be assumed to have benefited from the rising secular trend in female schooling. For example, in the Arab world, one in three women between the ages of 23 and 29 participate in the workforce, compared to 8 out of 10 men. This is despite a narrow gender gap in secondary and tertiary education (63% for men, 50% for women), and a situation where women outnumber men in high income countries (Crabtree 2012).

Furthermore, women who are employed are overrepresented in unpaid work or paid informal work where they are usually micro-entrepreneurs or engaged in smallholder farming. (Buvinic, Nichols and Koolwal 2014).
This gives rise to the question: Why has gender parity in education not translated to gender parity in labor force participation and employment? This is a pertinent question from a rights perspective and an empowerment point of view, as well as from an investment angle; rising female education enrolment implies that states, families and individuals are investing more in girls’ education and can reasonably expect economic returns to their investment. Moreover, feedback effects from labor market outcomes to educational investments may also occur: if educated girls face barriers in accessing jobs, their families may be reluctant to invest in education for them, thus perpetuating gender inequality in education.

This paper reviews the recent and growing empirical literature in developing countries that examines the determination of female labor force participation and employment, focusing on (1) the relationship between educational attainment and the probability of labor force participation, including the hypothesized U-shaped curve (Verick 2014) as well as (2) supply and demand side factors that promote or detract from female labor market participation, such as gender role attitudes, social norms and their transmission mechanisms (Campos-Vasquez and Velez-Grajales 2013), marriage (Klasen and Pieters 2013) childcare and eldercare (Maurer-Fazio et al. 2009), and labor market and economic conditions (Klasen and Pieters 2012). The paper attempts to summarize and synthesize the results of recent research while identifying areas where further research could be fruitfully undertaken.

The article is structured as follows. Section 2 lays out the conceptual framework, drawing from economic theory to contextualize the link between education and employment within the household model of labor supply and its extensions. Section 3 surveys the empirical literature, focusing on the current state of knowledge on the link between education and female labor market engagement in developing countries, drawing from developed countries for recent research and policy analysis has made important discoveries, where knowledge in developing countries is thin. The last section concludes with a summary, identifies knowledge and data gaps and next steps.

2. Economic theory and female labor force participation

According to economic theory an individual chooses to work in the labor market only if it makes sense to them to do so, i.e. if the costs outweigh the benefits. Costs and benefits may be thought of in monetary terms or in nonpecuniary terms. An obvious monetary benefit that accrues from working is the income it brings. The net effect of wage income on a person’s decision to work, or the number of hours they choose to work is ambiguous. On the one hand, an increase in wages increases the opportunity cost of not working i.e. makes it less attractive not to work, and therefore, individuals substitute work for “leisure”, i.e. higher wages have a substitution effect that leads to an increase in hours worked. Individuals may also cut back on the hours they work, reducing overtime or moving from full-time work to part-time work, owing to the income effect of an increase in wages which yields more income per hour or day of work.

The standard neoclassical model recognizes that labor force participation decisions are made within households, and are influenced by the labor force participation of other household members, the wages they earn, and any non-labor income the household commands and household preferences about who works and who doesn’t. An individual may reduce their hours worked, or choose not to work at all, when other members’ wages or household non-labor income rises, i.e. the income effect kicks in. If an increase in a married man’s wages causes him to work longer hours and spend fewer hours in “leisure”; his spouse may increase or decrease her labor supply depending on whether her leisure complements or substitutes for his leisure, i.e. there is a cross-substitution effect.
Economic theory has long recognized that “leisure” or what individuals do with their time if they are not working, really constitutes non-market work or domestic work or household production (Mincer 1962, Becker 1965). The presence of small children or elderly disabled people in the household requiring care increases the value of domestic work. Gender asymmetry in labor supply decisions arise from social and cultural norms that support traditional gender roles which assign these tasks to females and impinge on the way labor supply decisions are made. For females to engage in work outside the home, non-market care needs to be replaced with market care, so the availability and cost of market care has an important effect on labor force participation.

Finally, child birth (and often child care of pre-school children) causes women to leave the labor force, temporarily or permanently. The resulting intermittency of work experience from temporarily leaving the workforce is said to affect the career choices women make, and leads them to choose careers where human capital depreciation matters less. Maternity leave policies have ambiguous effects – they may influence employers not to hire women, given the additional cost of doing so.

When a woman’s educational attainment is higher, or she has better cognitive or non-cognitive skills, or she has training and experience that make her more productive – or signal higher productivity - the wages that she can command in the labor market are higher, and make it more attractive for her to work in the market relative to engaging in unpaid work at home. The decision will be influenced by the availability and cost of child-care and elder care, as well as prevailing cultural norms. Restrictive social norms that prescribe that a woman should not work outside the home impose a non-pecuniary cost to non-market work that perhaps can only be overcome at very high wages. Thus, any exploration of the link between girls’ education and female labor force participation needs to be contextualized in this framework of preferences and costs and constraints.

3. What do we know? An empirical review of the literature in developed and developing countries

In this section we highlight some results of studies that explore the determinants of female labor force participation in a developing country setting, drawing from the larger body of work in developed countries, where developing country knowledge is thin.

*Education, development, labor force participation and the U-shaped curve*

Education has the potential to help women transition to the labor force, through higher wages and through entry into higher-earning occupations. Returns to education for employed women are typically high in developing countries and in many cases exceed those of men (World Bank 2012).

Sinha (1967) posited that female labor force participation follows a U-shape through the process of development. In the early stages of development, with rising industrialization and urbanization, men take the jobs in industry, and women leave the dwindling agriculture sector to engage in home production. Alternatively, as male incomes rise, females substitute home production for labor force participation due to the income effect of their spouse’s incomes (Goldin 1995). It is only as the services sector develops that females re-enter the labor market, with education playing a role in drawing women up the U-shaped female labor force participation curve (Boserup 1970). Lincove (2008) suggests that home production (improving
child health, educating sons) may actually be the target of female schooling for some countries. Lincove (2008) tests for a U-shaped relationship between female economic participation for women aged 18 to 59 with lagged schooling enrolments, and with GDP per cap. Her results suggest that the cross-sectional relationship between growth, education and female labor force participation is changing over time.

However, country-specific studies are supportive of the U-shaped relationship, at least in the short-run, and indicate that as development leads to the increase of male incomes, this may have the effect of reducing the probability of females working (Gaddis and Klasen 2013). Other studies have found threshold effects in the relationship between education and labor force participation, i.e. at post-secondary/tertiary level (Aslam, Kingdon and Söderbom 2008, Chamlou et al, 2011, Cameron et al 2001, Mammen and Paxson 2000). By increasing the reservation wage of women, education may also increase non-participation in the labor force, especially if it turns out that educated women marry educated (and therefore higher income earning) men as Klasen and Pieters (2012, 2013) found in the case of India, during a period of high growth. Their results are consistent with those of an earlier ethnographic study by Kumar and Vlassoff (1997) which found that the effect of girls’ education in both Rajasthan (highly patriarchal, less developed) and Maharashtra (less patriarchal, more industrialized) because of the “power of gender ideology and practice, lack of economic opportunities for women, and largely irrelevant content and poor quality of education…it is only in theory that education is seen as a means of financial independence for girls; in practice girls are educated to secure a husband, not to get a job” (as cited in Malhotra, Pande and Grown 2003).

Kingdon and Soderbom (2008) find that while education in Ghana raises earnings indirectly by helping individuals gain entry into high-paying occupations, it has low direct effects on earnings. Similar results were obtained in a study on Pakistan by the same authors.

*Role of skills*

Recent and ongoing research in the United States and OECD countries indicates that both cognitive (hard) and non-cognitive (soft) skills are key determinants of adult earnings, with important policy consequences. According to analysis of the new PIAAC survey of adult skills over the full lifecycle in 23 countries shows that on average, a one-standard-deviation increase in numeracy skills is associated with an 18 percent wage increase among prime-age workers, with a range from 12 to 28 percent (Hanushek et al, 2015). Heckman et al (2006) find that both noncognitive and cognitive ability affects the acquisition of skills, productivity in the market, and a variety of behavior and that schooling raises measured cognitive ability and measured noncognitive ability. Key is the understanding that cognitive and noncognitive skills can be shaped, and that investment in both cognitive and non-cognitive skills early in life increases the benefits of education later in life (Kautz et al 2014). Heckman et al (2006) also find evidence of gender differentials in the effects of noncognitive skills on certain behaviors, which partially explain gender differentials found in the Perry Preschool program which were responsible for raising female employment at age 27 and on reducing female high school dropout rates compared to the male results.

Balcar (2014) reviewing studies linking soft skills and wage returns suggests there are significant wage returns to soft skills and that they contribute to closing the gender wage gap.
Similar studies are few in developing countries owing to the paucity of data on cognitive and noncognitive skills. Aslam et al. (2012) which investigates the economic outcomes of education for wage earners in Pakistan by analysing the relationship between schooling, cognitive skills and ability, and economic activity, occupation, sectoral choice and earnings, using data from a unique purpose-designed survey of more than 1000 households in Pakistan is one such exception.

Unemployment and Active labor market policies

Active labor market policies (ALMPs) typically refer to government programs that intervene in the labor market to help the unemployed find work and include state-provided employment services such as information on vacancies, training and vocational educational programs (TVET) and apprenticeships that improve skills and employability of the unemployed and employment subsidies, either in the public or private sector, which directly create jobs for the unemployed.

Business Training and labor

In addition to formal education, business and job training programs have been two of the main policy responses to foster women’s labor force participation. Several rigorous evaluations of such programs have been conducted to understand their role in promoting women’s economic empowerment suggesting mixed or poor results (Buvinic et al., for a review). Evaluations of business training programs in developing countries find slightly positive impacts on business creation, but weak results when it comes to business expansion (McKenzie and Woodruff, 2014) Results are also mixed for job (or vocational) training programs. Studies in developed countries find modest effects concentrated in the adult population (Heckman et al., 1999 for the US, Kluve 2010 for Europe). In developing countries, where the skills gap is more likely to be a binding constraint, field experiments find slightly more positive results (Buvinic et al, 2014 and Grimm and Paffhausen, 2015).

Institutional barriers

Gender roles have often determined that women spend more time in care-giving, both of young children and aged parents (Maurer Fazio et al. 2011). To design successful policy interventions, it is important to identify the key institutional barriers that prevent mothers, daughters and partners from engaging in the labor market. Institutional barriers may take the form of social norms or the absence of policies and programs that address the constraints that women face as mothers, daughters and partner. In the first case, a better understanding of the mechanisms that form, change and transmit gender role attitudes is necessary. In the latter case, a better understanding of the impact of policies such as child-support programs, parental leave etc. is important (Campos-Vasquez and Velez-Grajales 2013, Klasen and Pieters 2013, Maurer-Fazio et al. 2011, Del Boca and Locatelli).

Demographic transition and non-market work

A growing literature since the 1980s has analysed the effect of young children on married women’s labor force participation. Blau and Robins (1988) predicted that 87% of married women in the U.S. would be employed if child care costs were zero. Connelly (1992) calculated that this would decline to 47% if all women had to pay for child care. She went on to predict that
as more women join the labor force, the opportunities for informal child care will decline, and that this would slow the rate of female labor force participation. In a meta-analysis of 37 studies from developed countries, Akgunduz and Plantenga (2011) found large variation in labor force participation elasticities with some studies showing substantial participation gains from childcare and others showing insignificant effects. The author argues that it seems “overly optimistic to base labor market policy and projections on implementing price based policies like child care subsidies” in developing countries. “In countries with low female labor market participation, the elasticity is small despite also having relatively lower social spending and part-time rates, owing presumably to more structural and cultural reasons. Simple transplantation of high rate countries’ policies with regards to female participation is unlikely to pay off at the level that it might have for the benchmark countries.”

More recent literature also investigates the influence of elder care on female labor force participation. Ettner (1995) finds that, in the U.S. co-residence with a disabled parent leads to a large, significant reduction in work hours, due primarily to withdrawal from the labor force. As countries such as China (and to a lesser extent, Sri Lanka) move into that phase in the demographic transition where the population is ageing, females contemplating entering the workforce must face the dual challenge of child care and elder care. Evidence from urban Chinese household indicate that grandparents help in the caregiving of young children, increasing the labor force participation of prime age women (Chen 2005, Zhang 2004, Maurer-Fazio et al 2011). However, co-residence with an adult in need of care decreased these women's labor force participation (Maurer-Fazio et al 2011, Liu, et al (2010)).

Using a World Bank data set that collected information on attitudes towards women’s work outside the household, Chamlou et al, 2011 found a strong negative and statistically significant association between traditional social norms and the participation of women in the labor force.

4. What do we need to know? Some conclusions and next steps.

Knowledge gaps, policy analysis and data gaps

What is evident from the foregoing review is that the relationship between girls’ education and their labor force participation is complex and that context matters. Even in the case of developed countries like the United States, where there has been much research on the determinants of female labor force participation, disentangling substitution effects and income effects and the policy impacts has not been an easy task.

In developing countries, there is much that is still not known about the determinants of female labor force participation. Although there is some evidence to support a U-shaped curve - and therefore some optimism that with growth and rising female education, countries that are in the trough of the U will move up along the curve – the causes behind this phenomenon are insufficiently explored. To what extent are the different labor force participation rates of Latin America and the Caribbean and South Asia and Arab countries driven by structural differences in their economies? What role is played by cultural norms? Inadequate demand? Insufficient skills and training?

While there are some indications of important areas for policy research in the areas of skills – early childhood intervention, education quality, TVET, training for business, parental leave and
addressing norms, there is much that needs to be done before policy recommendations can be made.

Gaps in knowledge stem to some extent from gaps in data. New and ongoing initiatives that address some of these gaps include (1) the ILO’s “school-to-work transition surveys”, that attempt to track and understand the transitions from school to work or “idle status” of women between the ages of 15-29, which are being conducted in 28 countries; (2) the extension of the OECD’s Program for International Assessment (PISA) to developing countries which will help assess the quality of education in developing countries and (3) the World Bank STEP Skills Measurement Surveys which provide assessments of cognitive and non-cognitive skills (Sanchez Puerta et al. 2014). Buvinic, Nichols and Koolwal (2014) provides a comprehensive survey of gender data gaps

It is to be hoped that as these data gaps are filled, there will be opportunity for more fruitful research that can yield more definite policy analysis.

References

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