



The economic
impacts of
child marriage



**ECONOMIC IMPACTS
OF CHILD MARRIAGE:
WORK, EARNINGS
AND HOUSEHOLD
WELFARE BRIEF**



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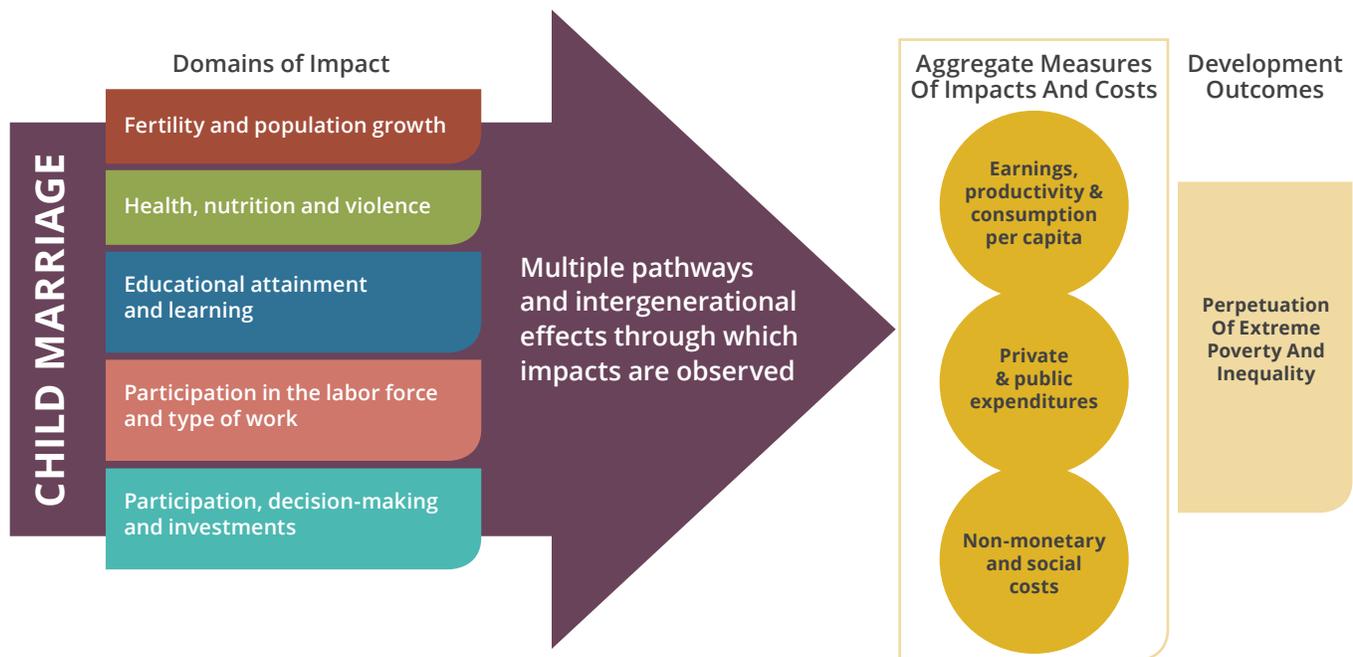
OVERVIEW

Each day, more than 41,000 girls worldwide are married while still children, often before they may be physically and emotionally ready to become wives and mothers. Child marriage, defined as marriage or a union taking place before the age of 18, endangers the life trajectories of these girls in numerous ways. Child brides are at greater risk of experiencing a range of poor health outcomes, having children at younger ages, having more children over their lifetime, dropping out of school, earning less over their lifetimes and living in poverty than their peers who marry at later ages. Child brides may also be more likely to experience intimate partner violence, have restricted physical mobility, and limited decision-making ability. Most fundamentally, these girls may be disempowered in ways that deprive them of their basic rights to health, education, equality, non-discrimination, and to live free from violence and exploitation, which continue to affect them into adulthood. These dynamics affect not only the girls themselves, but their children, households, communities and societies, limiting their ability to reach their full social and economic potential.

While child marriage is widely considered a human rights issue closely connected to gender inequality,¹ the significance of the practice's impacts at both the individual and societal levels suggests that ending child marriage may play an important role in alleviating poverty and in promoting economic development. Ending child marriage can improve health at the individual and population levels, increase productivity and enhance the opportunity to realize the gains in a country's economic growth that can result from declining birth rates and a shifting population age structure, commonly referred to as the 'demographic dividend.' To date, however, there has been relatively little in the way of rigorous assessment of the economic impacts of child marriage or how much child marriage may "cost" countries and societies.

To address this gap, the World Bank and the International Center for Research on Women (ICRW) collaborated on an extensive and innovative research project to assess the impacts of child marriage on a range of development outcomes, and to understand the economic costs associated with these impacts across countries. By establishing the effects that child marriage has on economic outcomes, the research project aimed to catalyze more effective and evidence-based action to prevent it. The conceptual framework that guided our work follows:

¹ As enshrined in UN General Assembly Resolution 71/175 (December, 2016), "child, early and forced marriage is a harmful practice that violates, abuses or impairs human rights."



The brief summarizes results from an analysis of the impacts of child marriage on women's work (specifically, labor force participation and type of work held), earnings and productivity and household welfare. It also estimates selected economic costs of these impacts. This brief and selected other publications from the study can be found at: www.costsofchildmarriage.org

IMPACT OF CHILD MARRIAGE ON LABOR FORCE PARTICIPATION

The relationship between child marriage and labor force participation is complex. On the one hand, lower educational attainment among women who marry as children may reduce their likelihood of entering the labor market and adversely affect the type of jobs they engage in. This may be the case in contexts where higher levels of educational attainment are associated with increased likelihood of labor market participation, in part due to the high opportunity cost of not working. In other contexts, specifically in low-income settings where labor markets tend to be informal and where many women, faced with poverty, must work simply for the household to survive, the impacts of lower educational attainment on women's labor market participation may be less salient.

Although child marriage need not necessarily have a direct impact on women's labor force participation, higher fertility associated with child marriage may influence women's roles in the labor market and the number of hours they are able to work. Frequent interruptions to employment due to childbirth and the time burden of care responsibilities can also affect the types of jobs that women can engage in, forcing them into lower-paying jobs and more unstable work situations. Child marriage can also curb women's agency and limit their bargaining power in their households, including possibly with regards to the decision to enter the labor force. Overall, the ultimate outcome of these pathways of impact is likely to

What Do We Mean by Impacts and Associated Costs?

The aim of the study is to estimate the impacts of child marriage on development outcomes and the economic costs associated with some of these impacts. The term "impact" is used for simplicity, but one must be careful about not necessarily inferring causality. Most estimates of impacts are obtained through regression analysis in order to control for other variables that may affect the outcomes of interest. In some cases, simulations are used. What is measured are thus statistical associations, and not necessarily impacts as could be observed, for example, with randomized control trials. Since child marriage cannot be randomized, we must rely on regression analysis in order to estimate likely impacts, but there is always a risk of bias in the measures of the likely impacts of child marriage. Based on measures of likely impacts, costs associated with selected impacts are then computed. Note that we provide cost estimates only for some, and not all impacts. These costs rely on a number of assumptions, and are thus tentative. Overall, the costs represent an order of magnitude of potential costs rather than precise estimations. For more details on the methodology and how it relates to key empirical findings, see Wodon (2017).

be highly context-specific and could imply either higher or lower labor force participation among women who marry as children.

For this study, we first conducted regression analyses using Demographic and Health Survey (DHS) data from 15 countries to measure the impact of child marriage on women's labor force participation and their likelihood of working for cash earnings. Whether women are paid in-kind or in cash is used here as a proxy variable for the nature/type of women's employment. Specifically, in low income countries in particular, in-kind payments are more common in certain sectors, such as agriculture and domestic work, which tend to employ less educated women. We would thus expect women with better jobs to be paid in cash.

Table 1 first provides estimates of the direct marginal impact of child marriage on women's labor force participation, controlling for other factors that could affect their participation. In most countries, with the exception of Bangladesh, marrying as a child appears to increase women's likelihood of labor force participation as an adult. Yet as discussed above, child marriage also has implications for a number of other factors that may influence labor force participation, including women's educational attainment and the number of children they have. The effects of child marriage on labor force participation through these pathways, especially educational attainment, can be significant. In many countries, compared to having no education, a secondary education

is associated with a higher likelihood of working, as well as a higher likelihood of being paid in cash. Therefore, the net effect of child marriage on labor force participation, including both direct and indirect effects, is not fully clear a priori.

To simulate the overall effect of child marriage on the likelihood of labor force participation and of work with cash earnings, we take into account three different effects. First is the direct effect child marriage may have on the likelihood of work. Second, we look at the effect of child marriage on labor force participation through its effect on women's fertility. Finally, we consider the effect of child marriage on labor force participation through its impact on educational attainment. Table 1 provides estimates of the overall effects for women who married as children, as well as for women as a whole at the national level. These effects vary significantly across countries. In Niger, for example, ending child marriage would result in a very small increase in women's labor force participation. At the national level, female labor force participation would increase by only 0.17 percent. In Bangladesh and other countries, the impacts are greater. Here, women who would have otherwise been child brides would be more likely - by 3.54 percent - to engage in the labor force. But in other countries, ending child marriage could be associated with a reduction in labor force participation for women. In general, the overall effect on labor force participation for women - those who married early and those who did not, tends to be relatively small, whether one considers any labor force participation or work with cash earnings.

TABLE 1: IMPACT OF CHILD MARRIAGE ON LABOR FORCE PARTICIPATION AND WORK WITH CASH EARNINGS

	Direct marginal impacts of child marriage		Simulated impacts of ending child marriage, including indirect effects through fertility and educational attainment			
	Labor force participation	Work with cash earnings	Labor force participation		Work with cash earnings	
			Women marrying early	All women	Women marrying early	All women
Burkina Faso	NS	0.0442	-0.75	-0.32	-2.27	-0.98
Bangladesh	-0.0136	-0.0142	3.54	1.80	-1.43	-0.73
DRC	0.0454	NS	-1.16	-0.37	0.59	0.19
Egypt	NS	NS	1.10	0.24	1.55	0.34
Ethiopia	NS	NS	0.83	0.45	0.91	0.50
Malawi	0.0250	0.0262	-1.29	-0.21	-1.36	-0.22
Mali	0.0484	0.0401	-3.50	-1.93	-4.03	-2.22
Mozambique	0.0592	NS	-2.81	-1.09	0.27	0.11
Nepal	0.0391	NS	-1.84	-0.57	0.89	0.27
Niger	NS	NS	0.23	0.17	0.12	0.09
Nigeria	0.0504	0.0201	-3.08	-1.61	0.13	0.07
Pakistan	0.0284	0.0249	-1.85	-0.80	-1.31	-0.57
Rep. Congo	0.0238	NS	-1.46	-0.68	0.46	0.21
Uganda	NS	NS	1.23	0.20	2.96	0.49
Zambia	NS	0.0357	1.04	0.24	-2.92	-0.68

Source: Savadogo and Wodon (2017a).

Note: NS = Not statistically significant at the 10 percent level.

○ ***“I got married, I got a selfish husband. I have two children and all their responsibility is upon me. I work on wages day and night. How do I make my children’s future? From where do I fulfil their wishes? I got lot of responsibility at a small age.”***

“[Girls] should read and write. But what I consider as a priority is marriage. At 16 years of age, the place of a woman is in the home with her husband and children. If she starts to work she will abandon her family”

QUALITATIVE DATA COLLECTED BY ICRW AND THE WORLD BANK.

IMPACT OF CHILD MARRIAGE ON EARNINGS AND PRODUCTIVITY

While the impacts of child marriage on labor force participation and work for cash are mixed, the results are not as varied when it comes to earnings and productivity. To consider this relationship, we posited that child marriage can curtail women’s earnings and productivity through its impact on higher fertility and – more importantly - lower educational attainment. We use wage regressions to analyze these potential losses, simulating earnings with both lower fertility and higher education.

Table 2 provides the main results from the estimations. In all 15 countries included in this study, the foregone earnings due to child marriage are positive, as expected. Considering only the women who marry early, the gains in earnings from eliminating child marriage range from 1.44 percent to 15.60 percent of baseline yearly earnings, depending on the country. Most of the gains are due to higher predicted levels of education among some of the women due to delayed marriage.

As expected, when the analysis includes all women – those who did not marry early as well as those who did, the impact as a share of women’s total earnings is smaller, ranging from 0.49 percent (in Zambia) to 4.58 percent (in Bangladesh) of base earnings, depending on the country. Finally, when including men as well (whose earnings are not affected), the gains in the population’s total earnings range from 0.17 percent to 1.68 percent of each country’s respective wage bill.

Table 2 also provides monetary values for the foregone earnings. These values tend to be large. In Burkina Faso, for example, ending child marriage could generate \$179 million (in purchasing power parity) per year in additional earnings and productivity. In Bangladesh, a much more populous country with higher standards of living, the valuation is much higher at close to \$4.8 billion annually. Among the 15 countries listed in Table 2, the largest monetary estimate of the annual economic cost of child marriage through lost earnings and productivity is for Nigeria, at \$7.6 billion.

The estimations reported in Table 2 are based on the World Bank’s I2D2 labor and living standards survey database which does not include variables measuring child marriage (or early childbirths). Therefore, the simulations implicitly assume that there is no direct impact of child marriage on earnings, controlling for education and other variables included in the wage regressions. Said differently, the impacts on earnings documented in Table 2 result from the impact of child marriage on educational attainment for girls, and to a lesser extent on the impact of child marriage on fertility, household size and the number of children in the household. These lead to indirect impacts of child marriage on earnings.

This is a limitation of the analysis, but datasets that have information on both earnings and the age at first marriage (or first birth) tend to support our assumption. For example, analysis was carried for selected countries including Niger and Nepal using existing large scale nationally representative living standards measurement surveys that have information on child marriage (in the case of Nepal) or early childbirths (in the case of Niger). The analysis suggests that in most cases, controlling for other variables including education, the fact that a woman married as a child or had a child early does not have a statistically significant impact on her earnings, considering both hourly and monthly or yearly earnings. This suggests that the estimates provided in Table 2 are probably not substantially biased by the fact that child marriage is typically not observed in labor and living standards surveys used for simulations.

In addition, the fact that the bias in the estimates in Table 2 that could result from not observing child marriage directly in many labor force and living standards surveys is likely to be small is also suggested by the results provided in Table 1, since the direct impact of child marriage on labor force participation is often small, and not necessarily negative. Most of the impacts observed in Table 2 come from impacts on earnings through educational attainment, and not through changes in labor force participation later in life when women marry as children.

IMPACT OF CHILD MARRIAGE ON HOUSEHOLD WELFARE

In this study, household welfare is measured in terms of household consumption per capita as well as other measures of well-being, including perceptions of food security, perceptions of poverty and household asset ownership. Our analysis suggests that child marriage does not have a direct impact on household welfare measures, but it does appear to have important indirect effects on household well-being through the pathways of fertility and education. Specifically, a higher number of children in the household is associated with lower levels of consumption per capita and thereby higher levels of poverty. Further, when mothers are less educated, household welfare, whether objectively or subjectively measured, is often lower. These effects are probably due in part to the negative impact of child marriage on earnings and productivity, and the fact that child marriage increases women's fertility and thereby household size, ultimately reducing household welfare. In addition, as detailed in another brief, child marriage can impact household welfare through impeding women's agency and bargaining power in their households. Specifically, child marriage is associated with lower decision-making power for women, particularly when it takes place at very early ages. With limited earning potential and resources of their own, as well as limited control over how household resources allocated, women's preferences to invest in the education and health of their children may not be realized, resulting in both immediate and intergenerational welfare losses.

TABLE 2: GAINS IN EARNINGS AND PRODUCTIVITY FROM ENDING CHILD MARRIAGE (GNI)

	Women who married early (%)	All women (married early or not) (%)	All women and men (%)	Gains (US\$ million in 2015)
Bangladesh	11.85	4.58	1.23	4769.8
Burkina Faso	7.45	3.66	1.13	178.5
DRC	2.66	0.99	0.44	168.9
Egypt	9.20	1.50	0.38	2892.9
Ethiopia	9.29	4.39	1.50	1581.4
Malawi	10.10	3.03	1.61	167.4
Mali	9.73	4.40	1.00	174.8
Mozambique	15.60	4.02	1.68	374.9
Nepal	12.70	4.30	1.41	710.6
Niger	4.23	3.03	1.61	188.4
Nigeria	7.97	3.31	0.98	7607.7
Pakistan	13.28	3.21	0.88	6299.9
Republic of Congo	4.48	0.52	0.17	19.1
Uganda	14.48	3.28	1.03	513.9
Zambia	1.44	0.49	0.24	68.2

Source: Savadogo and Wodon (2017b).



CONCLUSION

While child marriage may not have large direct impacts on labor force participation for women later in life, it does have substantial impacts on women's potential earnings and productivity. These impacts are largely due to the fact that by curtailing girls' educational attainment, child marriage tends to reduce their expected earnings in adulthood. When aggregated to the national level, the monetary value of these effects is quite significant, with countries foregoing on average about one percent of their earnings base due to child marriage. These estimates, together with other economic impacts of child marriage, provide a solid economic rationale for investing in stronger programs and policies to end the practice.

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