



The economic
impacts of
child marriage

बैदाम
ताल बाराही
रत्नमन्दिर

ECONOMIC IMPACTS OF CHILD MARRIAGE: EDUCATIONAL ATTAINMENT BRIEF

ECONOMIC IMPACTS OF CHILD MARRIAGE: EDUCATIONAL ATTAINMENT BRIEF



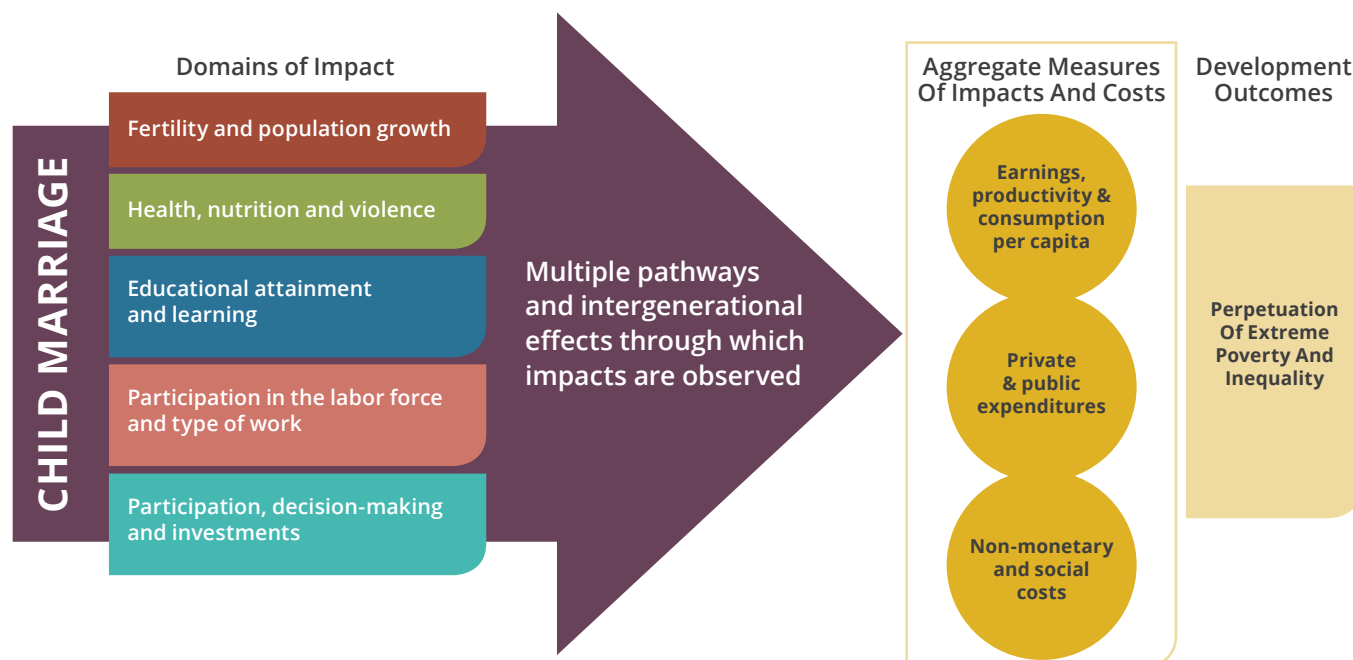
OVERVIEW

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."



In this brief, we summarize results from an analysis of the impacts of child marriage on educational attainment for girls and their children and document the extent to which keeping girls in school could help end child marriage. This brief and selected other publications from the study can be found at: www.costsofchildmarriage.org ↗

CHILD MARRIAGE AND EDUCATIONAL ATTAINMENT

The evidence base has long demonstrated that girls' education is among the most significant factors associated with age at marriage, with an extensive body of literature documenting lower levels of schooling as being strongly linked with a lower age at marriage. Education also plays an important role in shaping girls' aspirations for their lives, giving them the skills they need to engage productively in their communities and the workforce, and enhancing their voice and agency in personal relationships. It is also an important determinant of their health and that of their children, and it is likely to affect the education of their children as well. Assessing the impact of child marriage on education also matters for estimating the economic costs of the practice, as discussed in a separate brief in this series. But at the same time, estimating the impact of child marriage on education outcomes, as well as understanding the costs of these impacts, has been challenging, partly because the decision to marry early and the decision to leave school are often made at or close to the same time and can be closely inter-related.

In this brief, we explore the findings of our study in regard to the relationship between child marriage and educational attainment, as well as the effect this relationship has on the educational attainment of the children of those women who married as children themselves.

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).

ESTIMATING THE IMPACTS OF CHILD MARRIAGE ON EDUCATIONAL ATTAINMENT

Estimating the impact of child marriage on educational attainment is complex, for the reasons discussed above. What is often a very close, if not joint determination of child marriage and schooling decisions, as well as the bi-directional causal links between the two outcomes, pose particular challenges for disentangling the unique effect of child marriage. In some cases, girls may drop out of school for reasons unrelated to marriage, such as a lack of financial support, parents' preference to have her at home, or poor academic performance, and marriage may become the only seemingly viable life option available to them. In other cases, the decision to marry, made by themselves or others, may force them to drop out of school. When a girl leaves school and marries, it is typically extremely difficult for her to return to school at a later time. In addition, child marriage often takes place in settings where girls' educational and employment opportunities are very limited overall. Girls in these settings may face significant barriers to secondary education, such as cost, distance, or an unsafe or unsupportive school environment, that would limit educational attainment even in the absence of child marriage. Thus, many girls who drop out of school to get married may not have been able to achieve a much higher level of education if they had not married early.

Two main approaches have been used in the literature as well as in this study to estimate the impact of child marriage on educational attainment. The first approach relies on reported reasons for school dropout provided by parents or other informed individuals (such as school principals) in surveys aimed at understanding school dropout more generally. We can use this information to calculate the proportion of school dropouts reported to be due to marriage or pregnancy. The second approach relies on estimations of the determinants of school dropout using regression techniques. In this case, instrumental variables can be used to account for endogeneity (i.e., the fact that the decisions to marry and/or remain in school depend on each other). The second approach is generally considered to be stronger, as it is less likely to be biased by social norms around reporting of reasons for dropout, which may underestimate the role of child marriage. The results from each approach are discussed in the following section.

Reasons Mentioned by Parents for Daughters Dropping out of School

Table 1 provides the proportions of school dropouts that parents reported as being caused by child marriage or pregnancy in a few of the core countries considered for this study. The definition of the variables differs slightly between countries; for example, in Uganda, child marriage is not listed in the survey as a reason for dropout, so pregnancies are used as a proxy. Overall, it appears that child marriage and/or adolescent pregnancies account for a substantial share of adolescent girls dropping out of or not being enrolled in school. Parents reported that roughly 10 to 30 percent of school dropouts by girls were because of an early marriage or a pregnancy, with early marriage often playing a much more substantial role than pregnancies when both options are listed in the survey questionnaires. There is variation between countries, however, with parents in Mali being the least likely to report marriage or pregnancy as a reason for their daughter dropping out of school (7%), whereas in Nepal, almost one-third did (32%).

TABLE 1: CHILD MARRIAGE/PREGNANCIES AS REASONS FOR NOT BEING IN SCHOOL OR DROPPING OUT		
	Sample/Question	Share (%)
Egypt, 2012	Reason for dropping out, secondary/TVET level	Child marriage: 28%
Mali, 2013/14	Reason for not being in school, girls ages 14-17	Child marriage: 7%
Nepal, 2011	Reason for dropping out of school, girls ages 12-17	Child marriage: 32%
Niger, 2015	Reason for dropping out, secondary level	Child marriage: 23%
Nigeria, 2011	Reason for not being in school, secondary level	Child marriage: 11%
Uganda, 2012	Reason for dropping out, upper secondary level	Pregnancy: 23%
Source: Multiple country studies by the authors.		



“It’s not that I wanted to [drop out of school], it was out of ignorance that my parents said that a girl’s schooling is not the same thing as a boy’s and so they should pull me out of school to give me away in marriage. I did not want that.”

“We are faced with long distances to primary schools. Girls on their way to school meet men with money who entice our daughters with money for sex. Later some get pregnant and drop out of school. Also we have no vocational school that will train our girls after P7 and S4, so we see it as a waste of resources to educate a girl.”

QUALITATIVE DATA COLLECTED BY ICRW
AND THE WORLD BANK.

It is worth noting that subjective parental perceptions of the reasons girls drop out of school may understate the role of child marriage. Indeed, survey questionnaires related to school dropout often include other responses that may reflect the influence of marriage, such as parents not being willing to let a daughter continue her studies (which may mask a desire to have the daughter married), or the girl herself not being interested in further studies (which may mask a desire on the part of a girl to get married). As a way to triangulate the evidence, data can also be collected from other individuals who may be familiar with school dropout, such as teachers or principals. These data tend to suggest a larger impact of child marriage than parents’ reports alone. In Uganda, for example, school principals were asked about the main reasons for girls’ school dropout. These data indicate that pregnancies and child marriage account together for a majority of the reasons for dropout at the secondary school level.

Econometric Estimates of the Impact of Child Marriage

The second approach to estimate the impact of child marriage on educational attainment uses regression-based techniques to isolate the effect of marrying as a child while controlling for other factors that might influence this relationship. Using this approach and data from Demographic and Health Surveys (DHS), we pooled findings for girls’ secondary school

completion for multiple countries in sub-Saharan Africa, South Asia, and Latin America and the Caribbean. We then estimate the effects not marrying at various ages below the age of 18 on secondary school completion. The results are presented for secondary school completion in Table 2. In all regions, child marriage is found to have a statistically significant negative impact on secondary school completion. The strength of the effect increases the younger the age at marriage, as expected. For example, in sub-Saharan Africa, the estimate of -0.046 suggests that marrying at age 17 reduces the likelihood of completing secondary education by 4.6 percentage points. The earlier a girl marries, the larger the negative impact tends to be. Girls married at or before age 12 in sub-Saharan Africa, for example, are 12.3 percentage points less likely to complete school than those who married at 18 or older.

The effects tend to be larger in the Latin American and Caribbean and South Asia regions, in part because overall rates of secondary school completion for girls are also higher, making dropout more ‘costly’ in terms of educational attainment. These econometric estimates confirm the findings related to the reasons mentioned by parents - child marriage plays a major role in school dropout across countries and regions.

TABLE 2: IMPACT OF ENDING CHILD MARRIAGE ON CONTRACEPTIVE USE

	Latin America and Caribbean	Sub-Saharan Africa	South Asia
Married at 17	-0.045	-0.046	-0.049
Married at 16	-0.087	-0.078	-0.095
Married at 15	-0.124	-0.099	-0.137
Married at 14	-0.158	-0.112	-0.176
Married at 13	-0.187	-0.119	-0.210
Married at 12/ earlier	-0.213	-0.123	-0.240

Source: Nguyen and Wodon (2017a, b, c).

IMPACT OF EDUCATIONAL ATTAINMENT ON CHILD MARRIAGE AND EARLY CHILDBEARING

Our analysis indicates, not surprisingly, that child marriage reduces educational attainment for girls. Conversely, and importantly for policy, our analyses also suggest that increasing girls’ education is one of the best ways to avoid child marriage. This finding confirms the growing consensus among policy-makers and program implementers around the protective value of formal education in terms of child marriage. Reviews of the literature suggest that a variety of interventions designed to promote education for girls, including through conditional or unconditional cash transfers, school vouchers, free school uniforms, provision of clean and safe sanitation facilities, reductions in school fees, teacher training, and life skills curricula, may help delay the timing of marriage for

adolescent girls. The evidence on some of these interventions is mixed, but more often than not the interventions can help delay the age at first marriage and keep girls in schools.

Our analyses, again using an instrumental variable approach to account for the interdependence between marriage and schooling decisions, provide support for the argument that keeping girls in school reduces the likelihood of marrying as a child. Results, again using DHS data, are provided for the 15 core countries for this study in Table 3. Here we focus on both educational attainment and early childbearing (measured as births to mothers aged under 18 years).

With the exception of one statistically insignificant finding, educational attainment has a large and statistically significant effect on both child marriage and early childbearing in every country. In terms of child marriage, every additional year a girl spends in school reduces her probability of marrying before age 18 by between 3.1 percentage points (in Nigeria) and 12.6 percentage points (in Mali). Even larger effects are seen for early childbearing, depending on how much early childbearing takes place outside of marriage in a particular country.

TABLE 3: IMPACT OF GIRLS' EDUCATIONAL ATTAINMENT ON CHILD MARRIAGE AND EARLY CHILDBEARING

	Impact of an Additional Year of Educational Attainment (Beyond Primary) on Child Marriage	Impact of an Additional Year of Educational Attainment (Beyond Primary) on Early Childbearing
Bangladesh	-0.041	-0.060
Burkina	-0.071	-0.107
Democratic Rep. of Congo	-0.046	-0.031
Egypt	-0.054	-0.024
Ethiopia	-0.054	-0.060
Malawi	-0.037	NS
Mali	-0.126	-0.075
Mozambique	-0.070	-0.030
Nepal	-0.039	-0.032
Niger	-0.054	-0.126
Nigeria	-0.031	-0.036
Pakistan	-0.034	-0.028
Republic of Congo	-0.082	-0.089
Uganda	-0.072	-0.070
Zambia	-0.108	-0.046

Source: Wodon and Yedan (2017).

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

COSTS AND INTERGENERATIONAL IMPACTS

The impact of child marriage on educational attainment has important economic implications, because labor force earnings for women tend to be lower in adulthood when their educational attainment is lower. As explained in a separate brief in this series, child marriage is estimated to contribute, on average, to a loss in earnings of about nine percent for the women who married early across 15 countries. This translates into a loss of about one percent in earnings for the entire labor force, when factoring in all working men and women. This loss is valued (for 2015) at \$26 billion in the 15 countries considered for the estimations.

Over time, these losses are likely to be higher due to population growth as well as improvements in standards of living. In addition, there would be additional costs due to intergenerational effects. Indeed, apart from curtailing girls' education, child marriage may also affect the education prospects of the children of child brides. When we assess the impact of a mother's educational attainment, controlling for other factors, on her children's educational attainment, we find evidence of a strong effect in many countries. Given the impact of child marriage on lowering girls' educational attainment discussed above, there is no doubt that child marriage also affects the education prospects of at least some of the children – both boys and girls – of child brides, which leads to additional economic costs. The fact that child marriage contributes to the perpetuation of poverty also makes it more likely that there will be intergenerational effects at work.



CONCLUSION

Child marriage has a substantial negative impact on girls' education. This effect is consistent across virtually all of the countries included in these analyses and can have a number of consequences. In economic terms, one very significant consequence is related to the lower lifetime earnings of women who married as children, which is discussed in a separate brief in this series. But beyond the importance of schooling to acquire knowledge and life skills and to improve employability and lifetime earnings, formal education is also an essential way for girls to develop social skills and networks. Given the close correlation between child marriage and school dropout, the vast majority of girls marrying early miss out on these important opportunities. There are also intergenerational effects at work, with boys and especially girls of mothers who married as children less likely to complete secondary education themselves. Finally, as also discussed in another brief in this series, a mother's educational attainment also appears to have significant negative impacts on her health and that of her children. These and other consequences of child marriage in relation to the education of girls and their children are substantial and long-lasting. They warrant the adoption and implementation of interventions and policies to end the practice of child marriage.

REFERENCES

- Nguyen, M. C., and Q. Wodon (2017a). Impact of Child Marriage on Educational Attainment in Latin America and the Caribbean. Education Global Practice. Washington, DC: The World Bank.
- Nguyen, M. C., and Q. Wodon (2017b). Estimating the Impact of Child Marriage on Literacy and Education Attainment in Africa. Education Global Practice. Washington, DC: The World Bank.
- Nguyen, M. C., and Q. Wodon (2017c). Estimating the Impact of Child Marriage on Literacy and Education Attainment in South Asia. Education Global Practice. Washington, DC: The World Bank.
- Savadogo, A., and Q. Wodon (2017). Impact of Child Marriage on Women's Earnings across Multiple Countries. Education Global Practice. Washington, DC: The World Bank.
- Wodon, Q. (2017). Estimating the Economic Impacts and Costs of Child Marriage Globally: Methodology and Estimates. Education Global Practice. Washington, DC: The World Bank.
- Wodon, Q., M. C. Nguyen, and C. Tsimo. (2016). Child Marriage, Education, and Agency in Uganda, *Feminist Economist*, 22(1): 54-79.
- Wodon, Q., and A. Yedan (2017). Impact of Educational Attainment on Child Marriage and Early Childbirths: Estimates for 15 Countries. Education Global Practice. Washington, DC: The World Bank.

The Economic Impacts of Child Marriage project is a collaborative effort by the International Center for Research on Women (ICRW) and the World Bank, with funding from the Bill & Melinda Gates Foundation and the Children's Investment Fund Foundation, and additional support from the Global Partnership for Education. This series of papers is jointly produced by the International Center for Research on Women and the World Bank and is available at www.costsofchildmarriage.org. The findings, interpretations and conclusions expressed in this paper are entirely those of the author(s) and should not be attributed in any manner to the World Bank, to its affiliated organizations or to members of its Board of Executive Directors or the countries they represent. Citation and the use of material presented in this series should take into account this provisional character. The World Bank does not guarantee the accuracy of the data included in this work. The boundaries, colors, denominations and other information shown on any map in this work do not imply any judgment on the part of the World Bank concerning the legal status of any territory or the endorsement or acceptance of such boundaries.

Recommended citation: Recommended citation for this brief: Wodon, Q., Nguyen, M. C., Yedan, A. and Edmeades, J. (2017). *Economic Impacts of Child Marriage: Educational Attainment*. Washington, DC: The World Bank and International Center for Research on Women.

© 2017 The International Bank for Reconstruction and Development / The World Bank and the International Center for Research on Women (ICRW), Washington, DC 20433.