Age of Marriage, Weather Shocks, and the Direction of Marriage Payments

Based on BFI Working Paper No. 2019-123, “Age of Marriage, Weather Shocks, and the Direction of Marriage Payments,” by Lucia Corno, assistant professor, Cattolica University; Nicole Hildebrandt, principal, Boston Consulting Group; and Alessandra Voena, professor, UChicago’s Kenneth C. Griffin Department of Economics

KEY TAKEAWAYS

✓ Millions of girls under 18 are forced into marriage in developing countries around the world every year
✓ These child brides suffer elevated risks of domestic violence, harmful health effects, and lower rates of literacy and education
✓ This new research considers the economic forces at work in marriage markets involving bride prices and dowries
✓ For those hoping to reduce the number of child marriages, this work offers insights that could inform policies to reduce incentives for child marriages

Imagine that you are a parent of a young daughter in a country that provides a dowry to the groom’s family when your daughter is married. On the one hand, you want your daughter to marry and are willing to pay a dowry to ensure that she joins a good family. On the other hand, your resources are limited and you can only afford to contribute so much to a dowry.

Complicating your consideration is that you live an agrarian lifestyle, and your wealth is largely determined by the weather’s impact on your crops. If rain is plentiful and you make more money, then you can afford to marry your daughter sooner rather than later. If a drought occurs, though, you have little extra resources and your daughter’s marriage may have to wait. Further complicating this marriage market are the incentives and resources of a groom’s family. In times of drought, for example, a potential groom’s family would benefit from the dowry payment, and their demand price would be lower than if crops were good.
What do you do? These decisions are played out across rural India all the time, and in an analogous (though opposite) marriage market that exists in sub-Saharan Africa, where the tradition of bride prices means that a groom's family pays the bride's family, rather than receiving a dowry. At stake is more than the short-run economic well-being of families, but—more importantly—the long-run and intergenerational well-being of the brides, many of whom are forced into marriage as children under 18, and those brides' children.

Until recently, economics has had little to say about these complex markets for which so much is at stake. However, a recent paper by Lucia Corno of Cattolica University, Nicole Hildebrandt of Boston Consulting Group, and UChicago’s Alessandra Voena, "Age of Marriage, Weather Shocks, and the Direction of Marriage Payments," describes and analyzes these marriage markets and offers policymakers insights into how to design policies to reduce child marriage.

**Supply, demand, and the fate of child brides**

More than 700 million women around the world today were married before their 18th birthday, with 25 million of those before they turned 15. Child marriages, which are especially prevalent in Sub-Saharan Africa and South Asia, are associated with higher rates of domestic violence; harmful health effects for mothers, newborns, and infants; reduced sexual and reproductive autonomy; and lower rates of literacy and education. International organizations have called for urgent action to address the brutal consequences of child marriage to improve female human capital accumulation, empowerment, and autonomy.

Given such effects, why does childhood marriage persist? Practiced for generations, childhood marriage is often viewed as a strategy to protect daughters against such events as sexual assault or out-of-wedlock pregnancy, which would affect marriageability. Grooms also purportedly prefer younger brides based on beliefs that such girls are more fertile, less sexually experienced, and easier to control.

However, these cultural or institutional explanations for the persistence of child marriage may only tell part of the story; economic factors likely also play a role. Girls from poor households are significantly more likely to marry early than those from wealthier households. In Sub-Saharan Africa and South Asia, the focus of this research, child marriage is influenced by marriage payment traditions like dowries and bride prices. Building
on existing empirical work, this paper is the first to systematically analyze the relationship between child marriage, economic shocks, and the direction of marriage payments.

Voena et al.’s work is motivated by two questions: How do aggregate economic conditions affect marriage decisions, and particularly child marriage in developing countries? Do traditional marriage payment norms influence such a relationship? To investigate these questions, they developed an equilibrium model, which means that the forces of supply and demand resolve themselves at a particular price. Key to their model is that families choose when their children marry, and also that women move to the groom’s family upon marriage.

In this world, when aggregate income is temporarily low due to an economic shock, households with potential brides in a bride-price market would bring their daughter forward for marriage to increase the family’s income; households in a dowry market would, on the other hand, hold their daughters back because those households would find it harder to afford paying a dowry.

However, there are also demand forces at work, and in this world the grooms’ families are also impacted by the negative economic shock. Ultimately, dowries and bride prices would drop and the number of marriages will vary depending on which side of the market—the bride or groom households—is more sensitive to the income and price decline. Further, because brides move to a groom’s household, child marriages increase under bride price and decrease under dowry. Why? Because, for example, when a bride moves from home and into the groom’s home, the bride’s parents are likely to lose support from their daughter. Under such a scenario, the parents living in a bride-price market would have an incentive to bring their daughter forward into marriage and, at least, get something out of the transfer. In a dowry market, the opposite is true.

To test their model, the authors gathered data on the effect of rainfall shocks, which are a major driver of income variability in Sub-Saharan Africa and rural India. In particular, they studied the impact of drought, which is associated with a 10 to 15 percent decline in agricultural production. The results square with the authors’ model: droughts have opposite effects on the timing of marriage in Sub-Saharan Africa (bride-price) and in India (dowry). The effects are sizable and concentrated on child marriage: a drought raises the annual hazard of marriage between ages 12 and 17 by 3 percent in Sub-Saharan Africa, and it decreases the hazard by 4 percent in India. As to the effect that droughts have on fertility rates among child brides, a drought is associated with a 4 percent increase in the annual probability of having a child before 18 in Sub-Saharan Africa, with no corresponding effects in India.

Girls from poor households are about twice as likely to marry early as those from wealthier households. In Sub-Saharan Africa and South Asia, the focus of this research, child marriage is influenced by marriage payment traditions like dowries and bride prices. Building on existing empirical work, this paper is the first to systematically analyze the relationship between child marriage, economic shocks, and the direction of marriage payments.
Conclusion

For policymakers and others trying to reduce the number of child marriages in developing countries, there is good news in this research: marriage age responds to changes in aggregate economic conditions, or shocks. This means that policymakers can possibly replicate the effects of such shocks through appropriate policy. For example, as economic theory would suggest and as the authors’ work testifies, transfer programs that provide income to families in Sub-Saharan Africa should reduce the need for those families to put their daughters forward into marriage. Of course, such transfer problems would likely have the opposite effect in dowry markets like India. For dowry markets, the best approach might be conditional transfers; for example, withholding income payments until a daughter reaches 18.

Given that the authors’ work is on the frontier of applying economic reasoning to marriage markets and their effects on child marriage, there are plenty of avenues for future research. However, by shining a light on the economic role of culture and institutions, this work does provide hope for those working to reduce child marriage. Further, there are gains from replicating empirical work in different environments, and economic theory can help can help researchers understand where they are likely to find different responses.

CLOSING TAKEAWAY

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