

**Household Determinants of Teen Marriage and Teen Childbearing:
Sister Effects Across Four Low- and Middle-Income Countries**

Worldwide, more than 700 million women alive today got married before their 18th birthday, and more than 250 million entered into union before age 15 (UNICEF 2014). Although early marriage has decreased over the past 30 years, progress has spread unevenly across regions, and the practice remains pervasive across countries in Latin America and the Caribbean, South Asia, and sub-Saharan Africa (Koski, Clark, and Nandi 2017).¹ As of today, South Asia is home to almost half of all child brides worldwide (42 percent), and India alone accounts for one third of the global total (Vogelstein 2013). Yet sub-Saharan Africa is projected to overtake South Asia in having the world’s highest number of teen brides by 2050. In this region, even doubling the current rate of decline would not be enough to reduce the absolute number of brides due to rapid population growth (UNICEF 2014).

Early marriage and childbearing are deeply interconnected phenomena, and child marriage is often identified as one key driver of early motherhood, particularly in South Asia and sub-Saharan Africa. Every year, over seven million girls below the age of 18 give birth in low- and middle-income countries (LMICs), with an overwhelming majority of these births – around 90 percent – occurring within marriage (UNFPA 2013). Estimates from Niger, the country with the highest child marriage rate in the world, suggest that by the time they turn 18, 76 percent of girls are married and 51 percent have borne a child (UNICEF 2016). Women marrying in teenage years or younger have often little say in terms of when they marry and whom they marry (Jensen and Thornton 2003). As a result, teen brides might be unable to negotiate access to safe sex and medical care, leaving themselves vulnerable to health risks such as sexually transmitted infections and early pregnancies (Nour 2006). In some contexts, the pressure to become pregnant once married is strong, and teen brides end up having many

¹ “Early marriage” (or “child marriage”) is defined by the United Nations as the formal or informal marriage of a child under the age of 18.

children to care for while still young, thereby stretching household resources and resulting in less investment per child. The interconnected nature of early marriage and childbearing has important implications both for girls themselves and for their offspring (Lloyd 2005).

Early marriage and childbearing are key areas of concern for development policy in LMICs. Although not the direct target of a Sustainable Development Goal (SDG) *per se*, reducing early marriage is critical to achieving at least half of the SDGs. For instance, girls from poorer families are more likely to marry early than girls from wealthier families (*SDG1: no poverty*), and early marriage disproportionately affects rural and disadvantaged girls creating cycles of poverty that reinforce inequalities (*SDG10: reduce inequalities*; Dahl 2010; Otoo-Oyortey and Pobi 2003). Child marriage also keeps girls in poverty by depriving them of opportunities such as education (*SDG4: inclusive and quality education*) and access to paid employment (*SDG8: economic growth*; Field and Ambrus 2008; Jensen and Thornton 2003; Parsons et al. 2015). Early marriage is associated with less power, agency, and autonomy for young women in the marital household, and a lower likelihood of full participation in society (*SDG5: gender equality*; Dahl 2010). An early age at marriage translates into a lower age at childbirth, prompting additional concerns because childbirth in teenage years correlates with worse birth outcomes for the child and worse pregnancy outcomes for the mother (*SDG3: good health and wellbeing*; Ashcraft and Lang 2006; Fraser et al. 1995; Ganchimeg et al. 2014; Raj 2010). Not least, families with little food may marry their daughters early to have one mouth less to feed, and teen brides usually suffer high rates of malnutrition, due to early and frequent pregnancies (*SDG2: zero hunger*; Bunting, Lawrance, and Roberts 2016). Therefore, efforts to reduce early marriage and childbearing are critical to ensure a better future for girls, their children, their families, and countries.

The growing availability of longitudinal data across LMICs has made it possible to better understand these phenomena and trace the pathways that lead to the aforementioned outcomes. Longitudinal data similarly permit shedding light on the early-life determinants of teen marriage and

childbearing. Yet despite these developments, most socio-demographic research to date focuses on the implications of these life-course events for later-life outcomes (Dahl 2010; Glenn, Uecker, and Love Jr. 2010; Kane et al. 2013; Sekhri and Debnath 2014), rather than on their drivers or root causes. This paper seeks to fill this gap by comparatively exploring the household determinants of teen marriage and teen pregnancy – defined as marriage or childbearing occurring by the age of 19 – across four LMICs, namely Ethiopia, India, Peru, and Vietnam. We provide two main contributions. First, we document the prevalence of teen marriage and teen pregnancy across four LMICs, together with their associated factors. We do so by using comparative data from the Young Lives (YL) international study of childhood poverty tracking a cohort of children born around 1994-95 from ages 8 to 19. As the latest public-use round of data with information on marriage and childbearing has been recently released,² this is among the first YL studies shifting the focus from middle childhood and adolescence to early adulthood outcomes. Roest (2016), Singh and Espinoza Revollo (2016), and Singh and Vennam (2016) have carried out preliminary investigations of the core predictors of teen marriage and childbearing using YL data, yet their focus is exclusively on India.

Second, we contribute knowledge on how the family’s continued influence over children’s life-course decisions – such as marriage arrangements and early childbearing decisions – creates trade-offs among siblings, such that one sibling’s presence in the family affects other siblings’ outcomes. Specifically, capitalizing on a paper by Vogl (2013), we test the hypothesis that in resource-deprived contexts with rooted social norms the presence and number of older sisters – and the sex composition of siblings more generally – might be a key determinant of early marriage and childbearing outcomes. We complement purely associational evidence with a “natural” experiment within the family that takes advantage of variation in younger siblings’ sex. With this information, we examine the role of older

² Round 4, released in April 2016.

sisters by testing whether a girl whose next-youngest sibling is a girl faces a higher cumulative risk of marrying early and/or experiencing early childbearing as compared to a girl whose next-youngest sibling is a boy (henceforth, “sister effects”). This hypothesis is consistent with the idea that parents tend to arrange their daughters’ marriages in the exact birth order, hence older daughters should marry first – and similar effects would be observed on childbearing in contexts where teen marriage and childbearing are tied.

By providing a gender lens to the question of sibling rivalry and seeking a better understanding of the household determinants of teen marriage and childbearing as rooted in customs and traditions, our work speaks to, though it departs from the more conventional birth-order literature. Competition among siblings has received much attention for its potential to have long-lasting impacts on children’s outcomes. In high-income countries, the vast majority of studies on birth order and children’s outcomes suggest that first-born children have better outcomes such as higher educational achievement, higher labor market earnings, higher likelihood of full-time employment, lower teenage fertility, choice of college major, etc. (Barclay, Hällsten, and Myrskylä 2017; Bertoni and Brunello 2016; Black, Devereux, and Salvanes 2005; Booth and Kee 2008; Conley and Glauber 2006). Conversely, in low-income countries studies suggest that later-born children achieve more years of schooling, spend more time studying, and engage less in child labor (Edmonds 2006; Emerson and Souza 2008; Ejrnaes and Pörtner 2004; Seid and Gurmu 2015). Albeit indirectly, the present work relates to scholarship on birth-order effects on early marriage and childbearing in LMICs. Yet, rather than asking whether firstborns are more likely to experience early marriage or childbearing than laterborns, we explore whether the presence of older sisters in the household shapes this same likelihood, thereby placing an exclusive focus on girls and their sibling(s)’ sex-composition. In so doing, we shy away from the more traditional methodological concern of endogenous family size, and attempt to estimate plausibly causal effects of the role of older sisters on early marriage and childbearing using variation in younger siblings’

sex-composition. On a theoretical side, we complement the emphasis on the quality-quantity trade-off with dimensions such as parental control and institutions like arranged marriage.