CCWD
CENTER FOR CHILD WELL-BEING & DEVELOPMENT

University of Zurich[UZH]

DESK REVIEW

# Harmful Traditional Practices: Child Marriage, Initiation Rituals, FGM/C

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# Chapter 1

# Introduction

Traditional cultural practices span across all cultures and societies for generations and they reflect values and beliefs held by its members. Some of them are beneficial to all members, while some are harmful to a specific group, especially women and children. (UN Office of the High Commissioner for Human Rights (OHCHR), 1995)

There are numerous harmful traditional practices around the world. United Nations Office of the High Commissioner on Human Rights (2015) strikes the importance of attention on child and/or forced marriage and female genital mutilation/cutting (FGM/C), due to their impact on the reproductive health. Besides child marriage and FGM, another cultural practice gains its attention for the same reason as well – initiation rituals. This is a very common practice among over half of the societies worldwide (Schlegel & Barry, 1979). Some of these initiation rituals involve harmful practices, in particular related to forced sexual intercourse.

This desk review will focus on these three important categories of harmful traditional practices regarding reproductive health: child marriage, initiation rituals, and FGM/C.

## 1.1 Definition

**Child marriage** is defined by UNICEF as a formal marriage or informal union entered into by an individual before reaching the age of 18. This definition is also adopted by most governmental and non-governmental agencies. [1] [2]

[1] Though some believe that there are differences between the term "child marriage" and the term "early marriage", this desk review does not distinguish the two terms and uses them interchangeably.

[2] It should be noted that this desk review only focuses on the child marriage of girls, while disregards the child marriage of boys. This is because the consequence of child marriage on health

**Initiation rituals** or puberty rites, are ceremonies of the transition from childhood into the next stage (in most societies, an adolescent stage), as some social recognition, in ceremonial form, defined by Schlegel and Barry (1979). However, not every initiation rituals contains harmful practices, even under perspectives of modern society. This desk review will only focus on the harmful practices during initiation rituals.

**Female genital mutilation/cutting** or FGM/C, as defined by World Health Organization (2017), comprises all procedures that involve partial or total removal of the external female genitalia, or other injury to the female genital organs for non-medical reasons. WHO, MICS and DHS classifies FGM/C into four major types: 1) cut but no flesh removed; 2) cut and some flesh removed; 3) sewn closed; and 4) all others.

## 1.2 Prevalence of harmful traditional practices

### 1.2.1 Child marriage

While the definition of child marriage in Section 1.1 does not specify the gender of the child entering into union under age 18, girls in effect face a much higher risk of child marriage compared to boys. Roughly 700 million women alive today have been married before their $18^{\text{th}}$ birthday (UNICEF, 2013a). Figure 1.2.1 shows the countries with the highest percentage of women aged 20-24 who were married before they reached ages 15 and 18. Malawi is among the top 20 countries with respect to the rate of child marriage and the majority of the child marriage is between age 15 and age 18 in Malawi.

National averages however mask within-country heterogeneity in the prevalence of child marriage across different regions. For instance, in Ethiopia the median age at first marriage among women aged 25-49 is as high as 21.4 in the Addis Ababa region and as low as 14.7 in the Amhara region (CSA, 2012, p.64).

On the other aspect, the percentage of the population marrying before age 18 can also differ, even if the average age at first marriage is less heterogenous. In Malawi, as an example, where the average age at first marriage ranges narrowly between 16.8 and 19.3, the percentage of population involved in child marriage can be as low as 18.9% in urban Rumphi, and can be as high as 55% in rural Phalombe (The Demographic and Health Surveys Program, 2017).

primarily affects girls

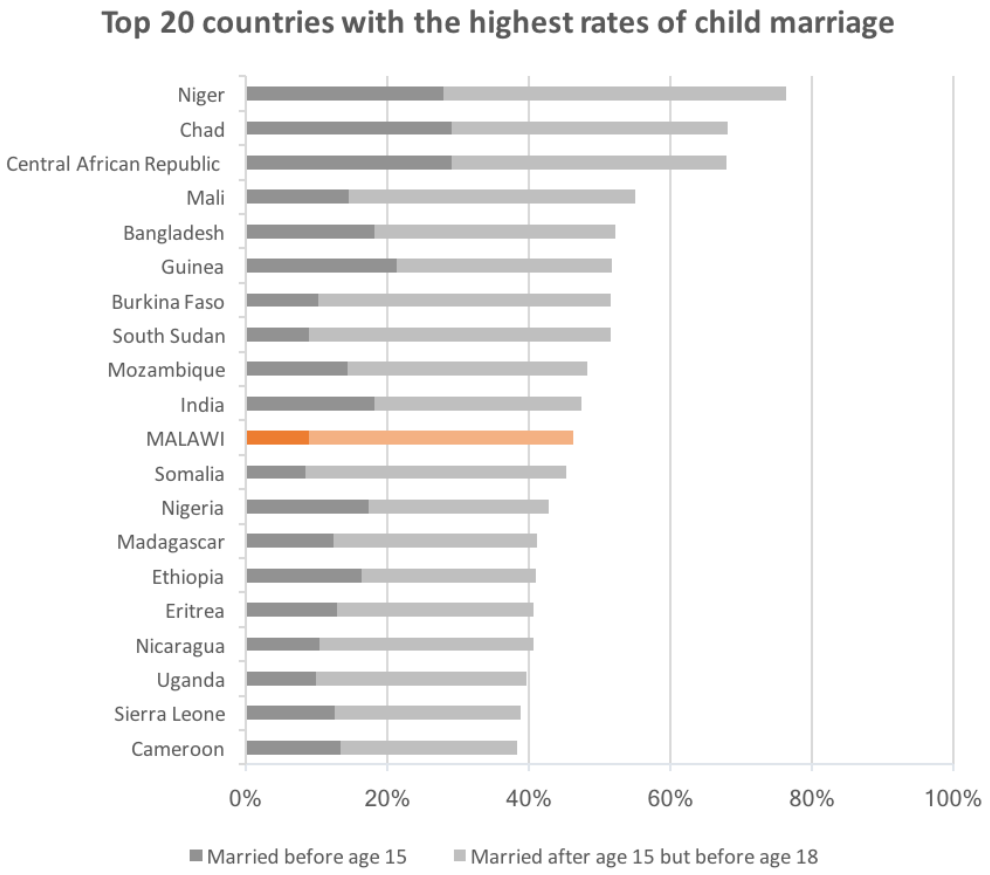



Figure 1.2.1: Percentage of women aged 20 to 24 years who were first married or in union before ages 15 and 18. Source: UNICEF global databases, 2016, based on DHS, MICS and other nationally representative surveys. www.data.unicef.org.

In recent decades, most developing countries have experienced a substantial reduction in the rate of child marriages with the largest changes being observed in South Asia and sub-Saharan Africa (Barbara S. Mensch, Susheela Singh, & Casterline, 2005; Nguyen & Wodon, 2012).

### 1.2.2 Initiation rituals

According to a study on 184 societies around the globe (Schlegel & Barry, 1979), approximately 36% of the worldwide societies have initiation ceremonies for boys, while 46% of them hold puberty rituals for girls.

The characteristics of the rituals vary dramatically. To start with, the timing of the rituals can be before genital maturation (21%), at first signs of genital maturation (29%), at genital maturation (10%), within one year after genital maturation

(27%), or even later till 18 years old (13%). As for concurrent initiates, the ceremony can be individually (47%), in small groups (11%), or in large groups (43%). Some initiations are for both boys and girls, while most of them are exclusive to a single gender.

The components of the rites differ even more significantly. There could be genital operation (for instance, FGM/C for girls, circumcision for boys), manipulations, learning adolescent/adulthood skills, enforcing social norms (for instance, obedience of wives to husbands), and forced or encouraged heterosexual intercourse (Schlegel & Barry, 1979).

In Kenya, pre-marital sex after the puberty rites is organized among the Kikuyu ethnic group. In the north-eastern part of the Central Africa, initiation rituals are preliminary of marriage, and therefore, uninitiated girls giving birth to children are considered real horror by the Bemba of Zambia (Klepp, Flisher, Kaaya, Press, & Town, 2008).

As for Malawi, a report (in knowledge, 2015) states that there are in general four types of initiation rituals for girls and two for boys, and are linked with ethnicity. Over 45% of the population living in communities where initiation are presented have attended the rituals. The Yao ethnic group witnesses the highest proportion of population ever being initiated – 93%, followed by Lomwe (55.1%), Ngoni (42.5%) and Chewa (42.2%). The prevalence also vary by regions (see Figure 1.2.2 from The Ministry of Gender (2013)).

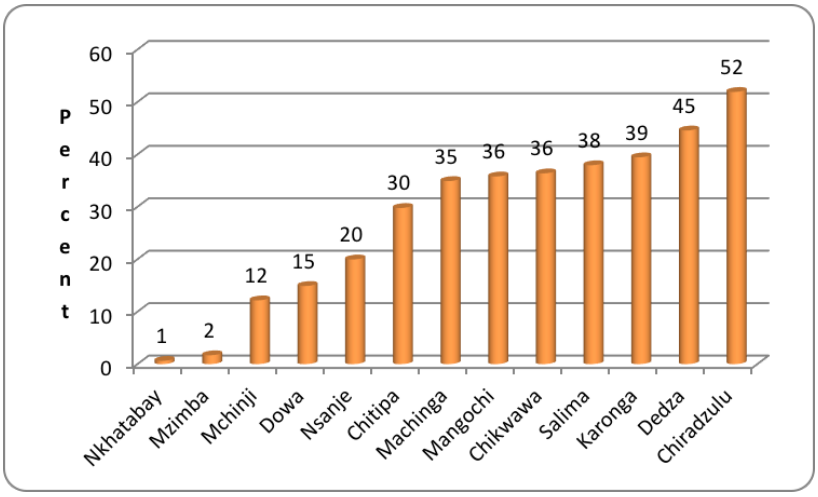



Figure 1.2.2: Prevalence of Girl initiation ceremonies by district, National Statistical Office, GBV Baseline Survey, 2013

Major harmful practices during initiation rituals include participants getting

bullied, being forced to have sex after the ceremony, and obscene language or activities.

Around 30% of the initiation rituals of boys involve components with pain, including beating and bullying (Schlegel & Barry, 1979). For instance, in Malawi, boys participating in *Jando* of the Yao and *Gule Wamkulu* of the Nyau get beaten and bullied (in knowledge, 2015).

Over 35% of the initiation rituals of girls involve heterosexual intercourse. At the end of *Chindakula* or *Maseseto* in districts Mangochi, Nsanje and Mulanje of Malawi, as an example, a male *fisi* (hyena) is hired to have intercourse with the newly initiated girls, as young as 10 years old, to help them practice the sex knowledge they have learned from the rituals (The Ministry of Gender, 2013). Sometimes, girls may perform *kusatsa fumbi* or *kuchotsa fumbi* (dusting) instead, a practice that each girl chooses a boy to have sex with (Silungwe, 2014) after the ceremony. Or, in *gwamula* or *kutsekukirana*, boys invade *kuka* (girls' dormitory)[3] at night and force the girls to have sex with them.

The Ministry of Gender (2013) and Silungwe (2014) documented another activity. Girls sometimes dance naked in public, where everyone in the community is welcome to watch.

### 1.2.3 FGM/C

According to UNICEF (2016), FGM/C is presented in numerous countries (see Figure 1.2.3).

The prevalence of FGM/C varies dramatically within countries. For those countries labeled by UNICEF as "FGM/C is not concentrated in these countries", reports still show some prevalence among certain groups. For instance, United States Department of State (2016) claims that FGM/C is practiced among some ethnic groups in Malawi, though UNICEF labeled Malawi as no concentration of FGM/C[4].

Also note that prevalence of FGM/C can be driven by extreme values within countries. As an example, Figure 1.2.4 shows that even though the overall prevalence of FGM/C in Senegal is only 26%, there are regions within Senegal with over 90% of FGM/C prevalence (UNICEF, 2013b).

The variations in FGM/C, without making causal statements, is present in

[3] This is not necessary a dormitory for students. In some rural areas in Malawi, there are / used to be *kukas* for girls to live in together, and *gowelos* for boys to live in together.

[4] It should be noted that it is difficult to obtain reliable data on the prevalence of FGM/C in Malawi, and the lack of accurate data could lead UNICEF to decide to label Malawi as "no concentration"

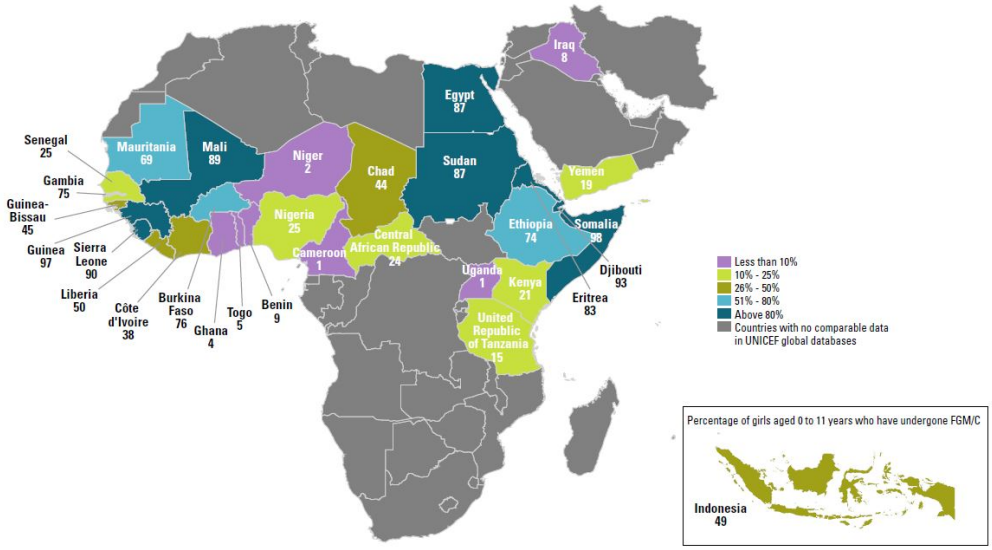



Figure 1.2.3: The prevalence of FGM/C varies greatly across countries with data

multiple aspects beyond nationalities (UNICEF, 2013b). It varies across different ethnic groups – the prevalence is as high as 100% in one ethnic group and as low as 0% in another, within, for example, Ethiopia. It can also vary within the same ethnic group but across countries – the prevalence among Peulh is as high as 99% in Guinea, but as low as 12% in Chad. The prevalence of FGM/C is also higher in rural areas than urban areas, among poor families than wealthy families, among uneducated women than educated women, etc.

## 1.3 Theory of change

Figure 1.3.1 shows a hypothesized structure of causal pathways connecting Faith Based Organizations (FBOs) with the harmful practices, including early marriage, initiation rituals, and FGM/C. Graphs of this type can be a valuable device to structure thoughts in the context of topics such as harmful practices where a multitude of interdependent causes, drivers and mechanisms operate in a complex way to produce an outcome (following the social norm of harmful practices) that one would like to understand better in order to ultimately be able to induce change. The diagram in figure 1.3.1 is composed of the following parts: On the very top, there are the adverse individual and societal effects of child marriage, harmful initiation rituals, and FGM/C, which are to be mitigated by reducing the

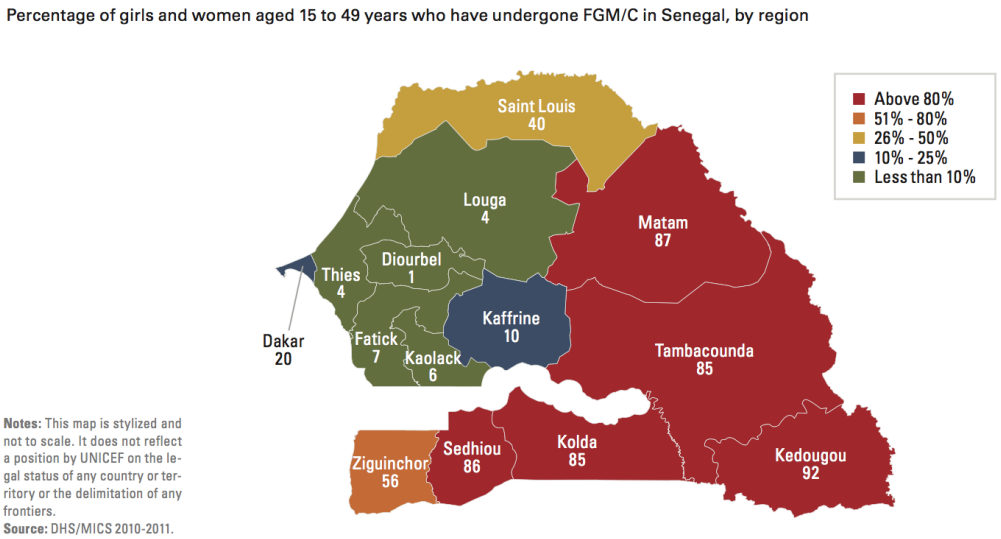



Figure 1.2.4: Variations in FGM/C prevalence in Senegal

probability that a child is married before reaching the 18$^{th}$ birthday (see section 2.1 for more on the consequences of child marriage), that a harmful traditional practice is carried out during initiation rituals (see section 2.2 for more on the consequences of harmful practices during initiation rituals), and that FGM/C is performed on a girl (see section 2.3 for more on the consequences of FGM/C). Faith based organizations are placed at the very bottom and the purpose of this graph is to explore how impulses given by these potential agents of change may propagate through a network of (intermediate) causes and drivers, mechanisms and psychological drivers to finally cause the desired reduction in the prevalence of harmful practices and its negative consequences.

More precisely, the dark blue hexagons represent important psychological dri-vers of individual behavior. Intrinsic motivations refer to those reasons for decision taking that are to be found within a person and that results from his/her self-desire to act in a given way (see sections 3.1.1, 3.2.1, and 3.3.1), while extrinsic motivations affect behavior through shaping the expected costs and benefits associated with choosing different actions (see sections 3.1.2, 3.2.2, and 3.3.2). Beliefs about the prevalence of some behavior in the larger population finally affect a given individuals's choice by virtue of shaping expectations of whether own's actions will be in line with those of others (see sections 3.1.3, 3.2.3, and 3.3.3). It has, for example, been shown that many people are more willing to follow the norm of cooperating in a socially beneficial group task if they expect that the other members of the group will do the same, while the same individuals have

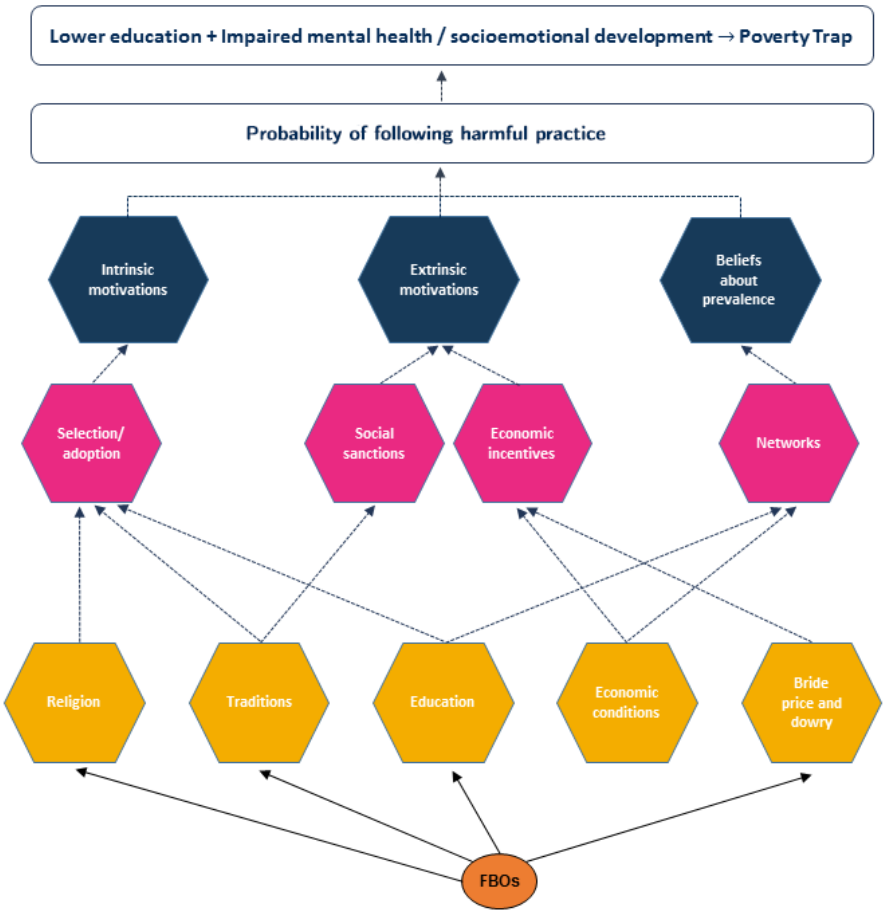



Figure 1.3.1: A theory of change [own figure]

also been found to be ready to punish non-cooperators at considerable costs to themselves (Fehr & Fischbacher, 2004; Fehr, Fischbacher, & Gächter, 2002; Fischbacher, Gächter, & Fehr, 2001). Figure 1.3.2 provides an intuitive graphical representation of how motivations and beliefs map into individual likelihood of early marriage.

Assume for the sake of exposition that this graph describes a given parent's likelihood to marry off her daughter early. The positive slope when moving along the curve then implies that the parent is more likely to arrange a child marriage if she believes that other households are planning the same for their children. If this parent was to adopt new *intrinsic motivations* for delaying the marriage of her daughter, this would mean that there is a downward shift of the curve. Put differently, although the parent's decision whether or not to marry off a daughter as a

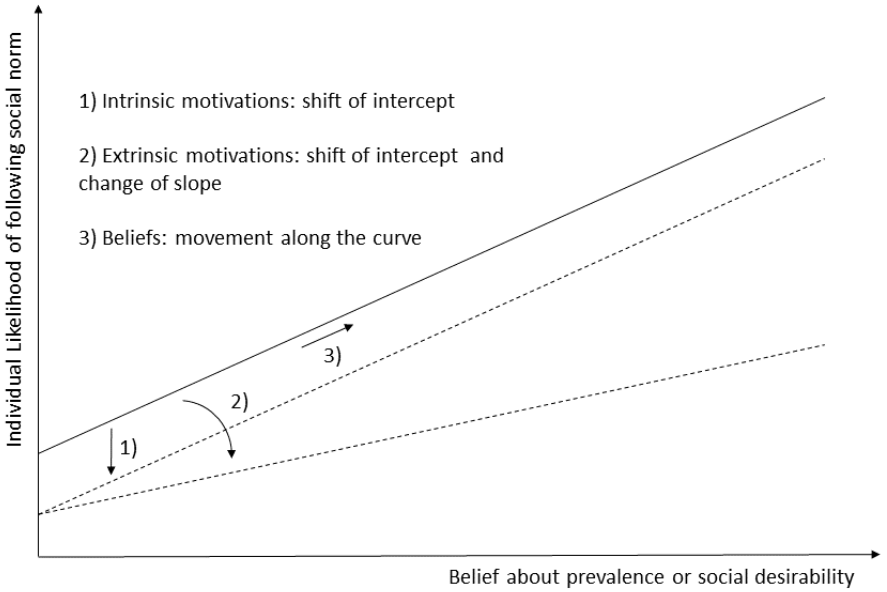



Figure 1.3.2: Intrinsic and extrinsic motivations, beliefs, and the likelihood of early marriage

child is still affected by the perception of how common the practice is, the newly gained intrinsic motivations to delay the marriage would make it generally more likely that the parent eventually follows his intrinsic motivations. Finally, extrinsic motivations may be affected for example by a conditional cash transfer requiring that parents do not marry off their daughter under age. In terms of figure 1.3.2, such an intervention would amount to a downward shift of the intercept in combination with a rotation of the curve resulting in a smaller slope. The reason for this is that a parent will now be extrinsically motivated to delay the marriage of a daughter in order to receive the conditional cash payment. Although there may still be a tendency to conform to the behavior of the majority (reflected by the fact that the slope is still positive), these social pressures are now countered by the economic incentives to receive the cash payment (reflected by the fact that the slope is now smaller).

Yellow hexagons in figure 1.3.1 denote observable (and possibly modifiable) aspects of the economic and social environment or personal characteristics individuals, which may constitute early elements of a longer causal chain that even-

tually affects a girls's risk of child marriage. These potential causes and drivers of child marriage will be analyzed in detail in part 3.1, 3.2, and 3.3 of this desk review, where they are being discussed with reference to the causal pathways sketched in figure 1.3.1.

Finally, the pink hexagons on the intermediate level represent mechanisms, which can translate lower level causes into direct drivers of behavior. Selection refers to the fact that people may at some level be able to shape and select their own intrinsic motivations if presented with different alternatives. Sanctions and incentives are the two predominant mechanisms that shape extrinsic motivations. Networks finally define the set of people with whom someone frequently interacts and therefore also constitute the reference group, with respect to which the prevalence and social desirability of a given behavior is being assessed. All the hexagons are placed diagrammatically in logical relationship to one another and the arrows indicate where causality is expected to run. In this sense, the graph can also be understood as a visual representation of hypotheses regarding the causal networks around the practice of child marriage. Rigorous empirical research may then allow to test for the adequacy of this representation.

# Chapter 2

# Consequences of harmful traditional practices

## 2.1 Child marriage

The practice of child marriage has consequences both on the individual as well as the societal level[1].

### 2.1.1 Early marriage and its direct effect on child brides

Early marriage has been found to be in many cases associated with profound psychological and physical distress due to the loss of adolescence, forced sexual relations, intimate partner violence, and early confinement to household roles (Elizabeth Yarrow, Kara Apland, Kirsten Anderson, & Hamilton, 2015; A. Erulkar, 2013; Speizer & Pearson, 2011; UNICEF, 2005, 2007). Child marriage may moreover be responsible for low educational attainment because young brides typically have not yet completed their education and continued school attendance after wedlock is extremely rare (Baird, McIntosh, & Özler, 2011; Duflo et al., 2015; Osili & Long, 2008; Parsons et al., 2015). In an intriguing study, Field and Ambrus (2008) document the causal effect of child marriage on educational attainment of girls in Bangladesh by exploiting variation in the age at menarche. If cultural constraints require that girls reach puberty before being admitted to the marriage market and age at menarche therefore (to some degree) predicts age at marriage, then any association between a girl's levels of education and her age at menarche can

[1] It is worth mentioning again that there the child marriage only refers to girls marrying before the age of 18, and child marriage of boys are not discussed here. Furthermore, child marriage of girls are majorly, though not completely, between an adolescent girl and an adult man.

be used to gauge the causal effect of marriage timing on educational outcomes. This reasoning is sound because age at menarche may affect education arguable only through the channel of marriage timing and not thorough any other variables related to education[2]. Based on self-reported data from rural Bangladesh, the results of this study suggest that postponing marriage by 1 year increases schooling by 0.22 years.

Apart from depressing effects on educational attainment of girls, early marriage may also reinforce gender based power inequalities among the spouses, since it is typically the bride who enters into union as a child while the groom is usually an adult (Otoo-Oyortey & Pobi, 2003). In fact, since the difference in age between the husband and the wife is in most societies inversely related to female age at marriage (see Figure 2.1.1), child marriages are characterized by especially large spousal age gaps (see also section 3.1.2.1.1). Child marriage is furthermore associated with early childbearing, which in turn has been shown to cause higher maternal mortality (death) and morbidity (disability or long-run health deterioration), as well as infant mortality (Sanyukta Mathur, Margaret Greene, & Malhotra, 2003). Interestingly, early marriage not only predicts early childbearing, but is associated with poor fertility outcomes more generally. Shorter birth intervals and a higher risk of unwanted pregnancies among child brides may suggest that girls who marry young are in a worse position to defend their interests against their husbands (Raj, Saggurti, Balaiah, & Silverman, 2009). However, these results stem from cross-sectional studies that compare child- to non-child marriages and therefore do not allow to readily disentangle causal and non-causal relationships. Finally, younger brides have been found to be at greater risk of HIV/AIDS compared not only to sexually inactive girls, but also relative to their sexually active unmarried peers. For example, young married girls in urban Kenya and Zambia report lower condom use than their sexually active unmarried peers while at the same time engaging in sexual relations with their husbands who are on average older and more likely to be HIV-positive compared to the boyfriends of unmarried girls at the same age (Clark, 2004).

[2] In more technical terms, the authors use the timing of menarche as an instrumental variable for age at first marriage. To be able to do so, they argue that third variables do not explain both the age at menarche and school outcome (e.g. physical or emotional distress) by showing that there are no significant differences in parents' wealth or health status for girls reaching menarche at different ages. Furthermore, the authors convincingly argue that the causal effect of reaching menarche on dropping out of school indeed runs through marriage decisions rather than for example traditional norms that discourage school attendance of girls once they have reached puberty. The latter argument exploits a traditionally strong preference for marrying daughters in order of birth and compares the influence of delayed puberty on marriage and schooling according to sex-specific birth order.

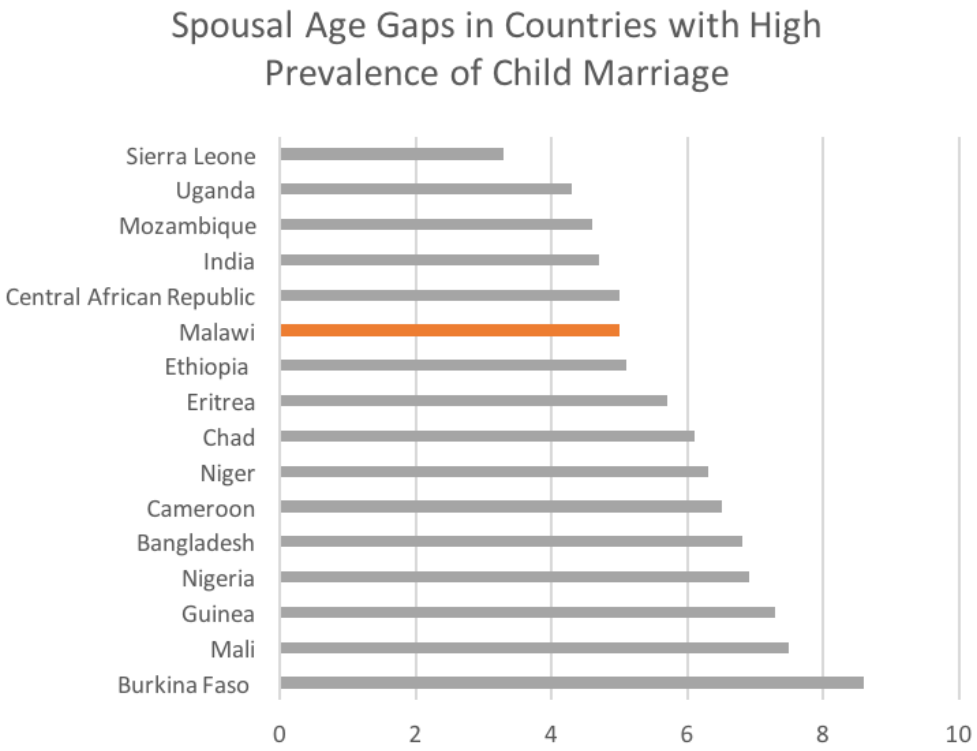



Figure 2.1.1: Average Spousal Age Gaps in Selected Countries (Source: United Nations Department of Economics and Social Affairs (2000))

### 2.1.2 The societal consequences of child marriage

The practice of child marriage arguably affects not only the child bride/groom and her/his immediate environment, but also produces long lasting effects at the societal level. Societal consequences from child marriage may stem from the fact that child brides are often ill-prepared for their role as mothers, which can harm the well-being of the next generation (UNICEF, 2001). Also, disempowerment of women through the practice of child marriage not only harms the girls that are being married off as children, but may moreover have negative consequences for the social and economic well-being of the society as a whole. Women empowerment has repeatedly been argued to be beneficial for the economic development of a society and to the extent that early marriage hinders girls from unleashing their full potential, reducing the prevalence of child marriage can be beneficial for the society as a whole (Duflo, 2012).

## 2.2 Initiation rituals

As the desk review focuses on the harmful practices during initiation rituals, this part majorly discuss the harmful consequences of initiation rituals.

### Education

Rehema, Verhan, Emmanuel, and Douglas (2014) interviewed girls having gone through initiation rituals in Morogoro, Tanzania, and summarized their viewpoints. Note that all conclusions from their research are only subjective points of view from the interviewed girls, rather than statistical or causal measurement. Among all interviewee girls, about 13% expressed that attending these weeks long initiation rituals wasted their precious school time. 61% of them also mentioned that they dropped out of school or played truant from school because of the initiation rituals.

### Mistreatment

In the same interview carried out by Rehema et al. (2014) in Tanzania, over half of the girls mentioned mistreatment during the rituals: being shouted at, beaten, slapped, and even pinched; also, they felt humiliated when asked to stand nude before elderly women for "cleansing". Some of the girls even experienced psychological and mental trauma.

Similar situations for boys. in knowledge (2015) reported over 22% of the boys and girls going through initiation rituals in Malawi have an objection against bullying and beating during the ceremony. Such mistreatment could lead to physical and psychological injury of participating boys and girls.

### Social Norms

Halley (2012) explored the initiation rituals, both for boys and girls, in Tanzania, and concluded that the initiation rituals is a result of the socio-economical environment of the country, and in turn reenforce the socio-economic dynamic of Tanzania. The boys' rituals *unyago* and the girls' rituals *jando* mark the transition from childhood to adolescence (*ukubwa*), and the rituals prepare boys and girls for the transition, and communicate the traditional norms, values and expectations of the sexual roles of men and women in the society. It especially emphasises the high value of girls' reproductivity, and expects girls to be economically supported by her husbands. The rituals solidify the social role of women as *watu wa*

*kupewa* ("those who are given to"), and social role of men as *tegemezi* ("those who are depended on"). Then marriage is merely a market – men provide economical support for women, in exchange for women's reproductivity to bear children and manage the household. Such social norms is passed on through initiation rituals for generations in Tanzania.

Maambo (2007) conducted a similar research in Zambia regarding the *Nkolola* initiation ceremony. Girls were taught in the ceremony how to run their homes and how to satisfy their husbands during intercourses. Even though the author listed it as positive effect and praised it as "a powerful tool of bringing about unity in the society", it actually solidifies the social role of females as appendage of males, and reenforces the idea of women being submissive to men.

Gender inequality could gradually lead to gender based violence (GBV). A survey in Malawi (Bisika, 2008) shows that around 5% of the population think that initiation rituals encourage men to abuse women, which is higher than three other cultural practices including drinking, poverty, and dowry. Note that initiation rituals are not nationwide in Malawi (while other cultural practices are). Considering only communities where initiation rituals are performed, increases this ratio considerably.

### Child Marriage and Sexual Abuse and Exploitation

Some major issues raised by the Tanzanian girls interviewed by Rehema et al. (2014) relate to marriage and sex. Girls blame initiation rituals to be the cause of early engagement in sexual relations (mentioned by 54% of the interviewees), early childhood marriage (30%), and early pregnancies (39%).

Maambo (2007) concluded in his study on the Zambian *Nkolola* initiation ceremony that young girls might want to experiment what they had learnt during the initiation as soon as possible. As a consequence, they ended up getting pregnant early, and had to enter early marriage. Some other girls, due to their zeal to experiment, go on to become exploited in prostitution.

Mbozi (2000) raised a more significant consequence of initiation rituals – facilitating the wide transmission of HIV and spread of AIDS. He categorized puberty rites into the second of the three categories of traditional cultural reasons. He built his case on initiation rituals in Zambia. In Zambia, initiation rituals do not require participating boys and girls to perform any kind of heterosexual intercourses, but do include demonstrations of sexual intercourses by their grandparents. He argued that the rituals of girls and women emphasis on how to please their husbands in bed, and meeting all the sex demand from their husbands. Such

submissiveness of women to men could disempower women to negotiate for safe sex. Under such social ideology, women insisting on safe sex could end up in divorce or being abandoned by their husbands.

Activities involving sexual implications during the initiation ceremonies, for instance naked dance in public after *msondo* in Malawi, are sexually exploitative and also increase the chance of girls contracting STDs and HIV/AIDS. Note that the naked dance is in public and everyone from the community is welcome to watch. Adult men, after watching the sexually implicative dance, might end up having sex with the girl dancers afterwards, with girls either willingly or unwillingly. Given that these are usually unprotected sex, such sexual abuse and sexual exploitation put girls at a high risk of getting infected with multiple STDs (The Ministry of Gender, 2013).

In addition, it is well documented that sexual abuse on children can lead to numerous psychological consequences, though not particularly focusing on sexual abuse during initiation rituals. Kendall-Tackett, Williams, and Finkelhor (1993) reviewed some of such studies, and concluded that sexually abused children were more likely to suffer a variety of psychological symptoms. Among all the noted symptoms, fears, posttraumatic stress disorder, behavior problems, sexualized behaviors, and poor self-esteem occurred most frequently. The effects could also be long-lasting: recovery can take up to 12 – 18 months for the majority of victims. However, sizable group of children even appeared to get worse.

The scenario gets much worse when the initiation rituals include heterosexual intercourses.

According to the report from The Ministry of Gender (2013), in Malawi, as part of puberty rites, a man called *fisi* (hyena) is hired to initiate the young girls into the sexual act and to test if they have mastered the sex lessons. The involvement of *fisi* increases the risk of girls to contract STIs including HIV/AIDS, as he is usually an older man who might have already been infected with STIs from his frequent unprotected sexual intercourses.

## Embodying intervention in Initiation rituals

[3]

Even though arguments have already been made that initiation rituals could serve as a hotbed of spreading HIV/AIDS and other STDs, it could also be utilized

[3] Though strictly speaking this part is not exactly the consequence of initiation rituals, the authors still find it necessary to include this part. Initiation rituals may have harmful consequences, but intervention through initiation rituals may reduce the harmful consequences and even lead to beneficial consequences.

the other way around to combat the spreading of HIV/AIDS and other STDs, especially because initiation rituals are, to their participants, the first and most essential channel obtaining knowledge regarding sex.

Kapungwe (2003) surveyed the initiation rituals in Zambia, where rituals are mostly conducted by professional initiators. He found out that no initiator mentioned anything about using condom in initiation rituals they facilitated. Moreover, over half of the initiators oppose the encouragement of condom use. However, further investigation showed that this high percentage was majorly driven by initiators with no education. Furthermore, almost all initiators were willing to learn the knowledge of condom use. He therefore suggested interventions to educate the initiators about the advantage of using condom, and through the initiators and initiation rituals to teach girls the importance of safe sex, in order to fight HIV/AIDS. Theoretically, it could work. However, caution is needed as this could be against the social norms and initiators, even after being educated about condom use, could still refuse to teach the use of condom during initiation rituals.

Munthali and Zulu (2007) draw a similar conclusion after they investigated the timing and content of initiation rituals in Malawi. They argued that boys and girls having undergone the rituals took such transition as a “permission” and implication to start having sex. They therefore suggested that in communities where a high proportion of adolescents go through initiation ceremonies, community leaders could be sensitized to promote abstinence and use of protective mechanisms including condoms in the ceremonies, in order to combat with the wide spread of HIV/AIDS and teenage pregnancies.

### Statistical Support

However, one essential point is that all aforementioned consequences of initiation rituals are summarized based on interview or survey results. They are mostly subjective perspectives of participants, which have no statistical power.

A statistical analysis in Malawi by (in knowledge, 2015) has rejected the hypotheses that initiation rituals reduce the age at sex debut, that initiation rituals increase the number of sexual partners, that initiation rituals reduce the use of condoms, and that initiation rituals increase the chance of having transactional sex. This further objects the correlation and association between initiation rituals and reproductive health practices.

Another ongoing research (Decker et al., 2016) has found the association between experiencing forced sex and participating in initiation rituals, though un-

certain of causality. Interestingly, the correlation exists regardless of whether *fisi* (hyena) was included in the rituals.

## 2.3 FGM/C

There are general two streams of consequences of FGM/C. One group of social scientists frame FGM/C as a health problem: FGM/C provides no health benefits, but could result in multiple complications and physical impairments. For example, Verzin (1975) systematically documented, in professional medical terms, 5 immediate complications and 10 remote complications, both physically and psychologically.

World Health Organization (2017) summarizes the complications in a plainer language. The immediate complications (during or right after the operation) include severe pain, excessive bleeding (haemorrhage), genital tissue swelling, fever, infections (e.g. tetanus), urinary problems, wound healing problems, injury to surrounding genital tissue, shock, and death. Long-term consequences include urinary problems (painful urination, urinary tract infections), vaginal problems (discharge, itching, bacterial vaginosis and other infections), menstrual problems (painful menstruations, difficulty in passing menstrual blood, etc.), scar tissue and keloid, sexual problems (pain during intercourse, decreased satisfaction, etc.), increased risk of childbirth complications (difficult delivery, excessive bleeding, caesarean section, need to resuscitate the baby, etc.) & newborn death, need for later surgeries (e.g. deinfibulation is needed for sexual intercourse and childbirth if infibulation/type III FGM/C was performed), psychological problems (depression, anxiety, post-traumatic stress disorder, low self-esteem, etc.).

Starting from the 1990s, there emerged another stream of social sciences reframing FGM/C as a violation of human rights. Shell-Duncan (2008) has summarized the argument. First, it violates *the Declaration of the Rights of the Child*: every child should have the opportunity "to develop physically, mentally, morally, spiritually and socially in a healthy and normal manner and in conditions of freedom and dignity" (UN General Assembly, 1959). Second, it violates *the UN Convention on the Elimination of All Forms of Discrimination against Women* (CEDAW): all states must "modify the social and cultural patterns of conduct of men and women, with a view to achieving the elimination of prejudices and customary and all other practices which are based on the idea of gender inequality" (UN General Assembly, 1979). Third, if FGM/C is defined as a form of torture, it also breaches freedom from torture. Fourth , FGM/C violates the Universal Declara-

tion of Human Rights: “everyone has the right to a standard of living adequate for the health and well-being of himself” (UN General Assembly, 1948).

The two different streams in understanding the negative consequences of FGM/C on girls and women also lead to different approaches of interventions to eliminate FGM/C.

# Chapter 3

# Causes and drivers of harmful traditional practices

## 3.1 Child marriage

This section discusses potential causes and drivers of child marriage. The structure of this chapter reflects the causal pathways depicted in figure 1.3.1. In section 3.1.1, we discuss how traditions (section 3.1.1.1.2) and education (section 3.1.1.1.3) may affect the probability of child marriage through shaping intrinsic motivations. Section 3.1.2 is dedicated to social sanctions and economic incentives, and we review evidence for the role of traditions (section 3.1.2.1.1),bride prices and dowries (section 3.1.2.2.1), and economic conditions (section 3.1.2.2.2) in shaping decision around child marriage. Finally, section 3.1.3 briefly talks about how networks may shape beliefs about the prevalence and social desirability of child marriage.

### 3.1.1 Intrinsic motivations

This section discusses intrinsic motivations for and against child marriage. Hence, it deals with behavior that is induced by the self-desire of girls to delay their wedlock or the commitment of parents not to marry off their daughter as a child, abstracting from the economic incentives and social sanctions involved in those decisions.

#### 3.1.1.1 Selection

Intrinsic motivations are an important driver of behavior and may be affected among others by religion, traditions or educational attainment. However, figure

1.3.1 calls to attention that people may differ in terms of their commitment to traditional practices or their receptivity of educational messages. Hence, while traditions or education may certainly affect intrinsic motivations, their effects may not be the same for every individual.

#### 3.1.1.1.1 Religion and Faith-Based Organizations

On top of shaping an individual's private world view, religion also acts as a cultural system defining the set of approved social behaviors and practices. While personal faith can be an important source of intrinsic motivation to act according to the prescribed behavior, social sanctions associated with deviation from those norms provide additional extrinsic motivations. Hence, to the extent that religious leaders have some leeway in how to interpret religious precepts and provided that the community is receptive to their preachings, personal opinions of religious leaders may have a wide reach and influence the mode of conduct of many members of the community. Increasing attention and focus have been given on faith-based organizations and viewing them as "legitimate actors in the quest for development and transformation" (Haar & Wolfensohn, 2011).

**Reasons to Involve Faith-Based Organizations** Child marriage is embedded and rooted in various religious and other socio-cultural practices in many regions. It is therefore important to involve the related religions to fight child marriage. However, the relationships between faith and child marriage is not straightforward and can vary across different communities (Gemignani & Wodon, 2015). This requires further study of such relationship but also creates opportunities: as the relationship can be altered according to different communities, it is possible to end child marriage through the channel of religions.

It is worth mentioning that people of various religions support early marriage and it is sometimes contentious within many religious communities. For instance, Orthodox Christian communities in Amhara region of Ethiopia embeds child marriage into the religion, even though the national Orthodox Church of Ethiopia opposes such practice (Karam, 2015).

Leaders of religions and faith-based organizations are to some degree at grassroots level, and can therefore have influence where the State cannot (UNFPA, 2005). Their influence lies in daily contacts within the communities (Greene, Perlson, Taylor, & Lauro, 2015), and is, in some regions, much more intense and more influential than that from the State or other sources, especially on the aspect of daily lives within the community.

Religions and faith-based organizations have mass network within and across the countries. A study (A. Erulkar, Ferede, & Ambelu, 2010) revealed that in eight regions of Ethiopia, faith-based organizations can reach around 80 percent youth in both rural and urban areas, and this leads to an extensive opportunity for reaching adolescent girls. One Malawian FBO – the Christian Health Association of Malawi (CHAM) claimed that they alone can reach over 4 out of the 18 million Malawian with health services (Taylor, 2015).

Marriage arrangements are typically embedded in traditional rituals and religious practices, which implies that religious leaders may exert an especially strong influence on this part of societal life. Some argue that engagement with religious leaders could be the most important strategic instrument implementing human rights of women, especially in marriage (Holtmaat, Naber, & Others, 2011).

**Methodology to involve Faith-based Organizations** There are various methods to involve religions and faith-based organizations into ending child marriage. The key reason to involve faith-based organizations lies on their influence on grassroots communities.

A pilot project in Nigeria, as reported by Walker (2015), has provided a guidance to involve religions and faith-based organizations.

In order to exploit the influence possessed by faith-based organizations, the first step is to recruit and building trust with the leaders from the target faith-based organizations. In the second step, educate the recruited leaders with correct knowledge regarding early marriage – pointing out the misconceptions and true prevalence, etc. Ideally, the leaders will accept these new knowledge and change their behavior, which is the third step. Then in the fourth step, such change will translate into outreach to strategic audiences and influence them with the correct information. Such could alter the behavior of strategic audiences consequently in the final step. Figure 3.1.1 shows the guidance in a flow chart.


Figure 3.1.1: Flow Chart of Inventions Involving Leaders of Faith-based Organizations

UNICEF (UNICEF, n.d.) proposed a methodology in a broader sense. It divides

the influence into five levels and suggest different approaches for each level, as shown in Figure 3.1.2.

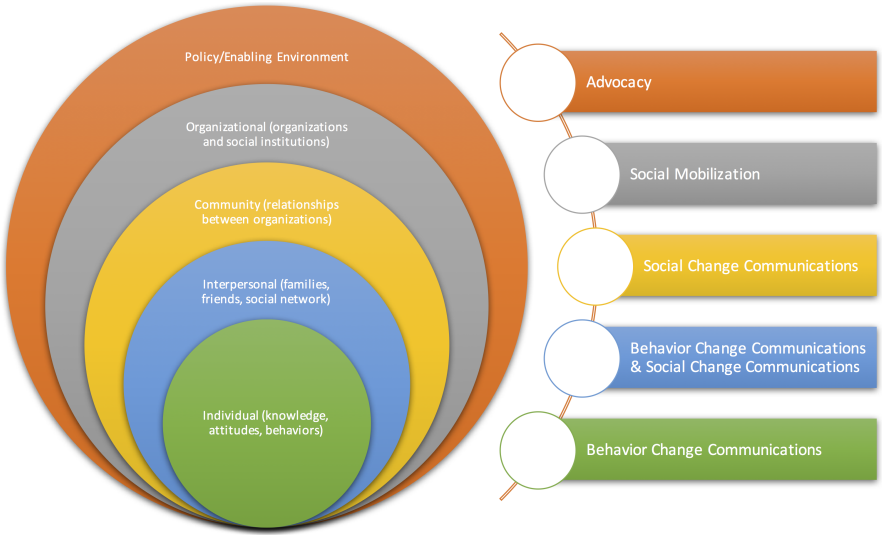



Figure 3.1.2: The Social Ecological Framework proposed by UNICEF

In this framework, works can be done in various levels. On the top level, advocacy can be used to influence the national religious leaders. On the organizational level, social mobilization strategies can be utilized: local religious leaders can directly form and alter the social norm; shifting the mind of local religious may be able to shift the social norm. On the lower levels, religions and faith-based organizations can also be useful through indirect channels: leaders of religions and faith-based organizations can communicate with a group or even individuals to change their behavior, namely social change communications and behavior change communications respectively.

**Reported Cases** In 2007, a large-scale household survey was conducted among Ethiopian households in the Amhara region with the aim of estimating the local population's exposure to early marriage prevention messages. Interestingly, the study finds that adolescents were most likely to have received marriage prevention messages through local religious leaders, which underlines the potential to conduct *Communication for Development (C4D)* initiatives centered on faith based organizations (Gage, 2009). A comprehensive desk review by the African Union surveys the existing literature on traditional and religious practices in Africa surrounding child marriage and provides summaries of sixteen studies assessing the role of religion and traditional practices in reducing the prevalence of child mar-

riage (African Union, 2015).

Experiences from UNFPA (2005) suggest that it is possible to involve religious organizations once evidence-based information is presented. Furthermore, early marriage is considered taboo in some regions. People are not willing to talk about early marriage and other taboos. Engaging with leaders of religions and other FBOs makes it possible for public discussion of these taboo issues. The vast national network of religions and FBOs also makes it possible for UNFPA, and other potential international organizations, to reach the most vulnerable and marginalized communities within that certain country.

Several interventions involving FBO leaders to end child marriage were reported by Greene et al. (2015). One case was from Kenya in 2012. Coexist Kenya worked with the community elders, and encouraged girls to return to school. Men are encouraged to join their initiative which discouraged early marriage. They successfully eliminated all early marriage in that year. Nevertheless, how much of the elimination can be attributed to the intervention and whether the effect is long-lasting are still unknown.

Another case was from Zambia, where the government worked with chiefs and tribal leaders. FBO leaders used public forums to address the harmful consequences of child marriage within the communities. However, the impact of such intervention was not estimated nor documented.

They also documented some intermediate interventions. One is a programme empowering faith leaders in Ethiopia and Nigeria with knowledge to end child marriage. The program was estimated to shift the attitudes of those faith leaders on child marriage: a shift from 40 percent approving elimination of child marriage, to 93 percent in Ethiopia; and a shift from 25 percent to 80 percent in Nigeria. Whether or not these shift can translate into elimination of child marriage, and if so how large, remain unknown.

A Catholic organization named GHR Foundation has also done some work in Kenya. They funded efforts to empower Christian, Muslim and traditional leaders to work with different stakeholders, including schools and government agencies, to reduce child marriage. They have already reached out to more than one thousand children to train them with knowledge regarding harmful consequences of early marriage (Karam, 2015). This proves that working with different religion institutions and faith-based organizations is also feasible. However, GHR only reported the number of children they have influenced, but no description or measurement about the magnitude of the influence.

While the experience gained in these studies will certainly prove helpful in

designing future interventions, a thorough empirical analysis based on a controlled experimental design that would allow to causally attribute the activities of faith based organizations to the reduction in the prevalence of child marriage is missing so far. Assessing the relative efficacy of communicating early marriage prevention messages through faith based networks, as opposed to disseminating this information via secular institutions (e.g. the educational system) will provide highly valuable insights.

#### 3.1.1.1.2 Traditions

**Early marriage and the bride's "purity"** The literature on early marriage repeatedly singles out the threat of premarital sex or more vaguely the potential loss of a girl's "purity" as an important driver of early marriage. Similar arguments have been brought forward to rationalize the practice of female genital cutting (FGC). In this section, we try to identify whether there exists a systematic relationship between early marriage and FCG, but do not find any evidence for such a link using data from Ethiopia and Sudan[1]. Nevertheless, we believe that there is a need for empirical research that aims at identifying the role that parents' fear of premarital sex plays in the decision about the timing of marriage.

Across many religions and societies, a high value is placed on the virginity of the bride (Broude & Greene, 1976; Schlegel, 1991; Schneider, 1971). In societies that practice child marriage today, concerns related to the perceived threat of a daughter losing her virginity before wedlock are often cited as a motivation for parents to marry off their daughter early (Elizabeth Yarrow et al., 2015; Gottschalk, 2007; Nicola Jones et al., 2014; Nour, 2009). Wahhaj (2015) develops a theoretical model of early marriage, in which the bride's "purity" is considered an asset on the marriage market that cannot be observed directly. Based on the assumption that "purity" is constantly at risk and may get lost over time, agents in this model use the age of a bride as an indicator of her expected "purity". An interesting feature of this model is that it can explain how the practice of early marriage may persist even in the complete absence of any intrinsic preference for young brides. This is in sharp contrast to much of the literature on early marriage, which takes a preference for young brides as given, and motivates the question whether is truly the bride's youth that is ultimately valued in child marriages.

[1] The two countries are chosen majorly due to their high prevalence of child marriage and the availability of high quality data. We would like to also extend the empirical study to Malawi; however, the low quality of data prohibits us from doing so.

Furthermore, teenage pregnancies can also lead to child marriage for the same reason: the teenage pregnancy is considered legit and the pregnant girl is still "pure" if she marries after the pregnancy and before delivering the baby Chilman (1979).

**Empirical analysis using DHS data** Claims about the role of early marriage in containing the "risk" of premarital sex are typically based on individual assertions of parents and have not been subject to rigorous empirical testing. At the heart of any explanation for early marriage, which cites expectations about the bride's "purity" or the fear of loss thereof, lies the assumption that older brides will in expectations be more likely to have engaged in premarital sexual relations relative to younger brides. Here, we will engage in a tentative test of the assumption that early marriage serves (at least partially) as a way to preserve the credibility of a bride's virginity. More precisely, we use micro-data from countries that have a tradition of female genital cutting (FGC) and ask whether there is a systematic link between this practice and the timing of marriage at the individual level. To the extent that infibulation (type III female genital cutting) is performed to "ensure" a bride's virginity at marriage, it may be expected that parents who decide to have their daughter undergo infibulation face lower pressure to marry her off early. The underlying idea is that both FGC and early marriage may share the same motivations to ensure the best possible marriage prospects for a daughter and that in this sense, these two traditional practices may be substitutes for each other (Pankhurst, 2014).[2] A 2008 World Vision report puts the hypothesized link as follows.

> *"Social meanings behind FGC and early marriage can vary according context, but one consistent finding in the research has been that both are linked to preserving the sexual 'purity' of adolescent girls. In two communities in the Somaliland region of Somalia, we found that health messages about the risks associated with infibulation (the so-called 'type three' form of FGC) had resulted in communities practising less extreme cliteridectomies (the 'type one' form). This created the concern, however, that girls might be more likely to engage in premarital sex as a result. Some girls in World Vision's focus groups said they considered early marriage to be a means to protect their dignity and avoid the social stigma surrounding the perception that they could be more open to premarital sex."* – (World

[2] In principle, it is also possible that FGC and early marriage are not used as substitutes, but instead households will resort to both cultural practices simultaneously if they are worried about premarital sex. In this case the data should reveal a positive association between FGC and early marriage.

Vision, 2008).

However, to the best of our knowledge this link between early marriage and female genital cutting has not been tested empirically so far. Figure 3.1.3 shows the results from a survival analysis based on a sample of unmarried girls in Ethiopia. Time (on the x-Axis) is measured in years since birth and the survival rates (on the y-Axis) indicate the probability that a girl is still unmarried at any given age. The target population in the DHS survey are married and unmarried women aged 15–49 and we right-censor all subjects that had not yet been married at the time of the survey, which implies that we make no assumptions about whether or not these women would marry later in their life. We find that girls who have under-

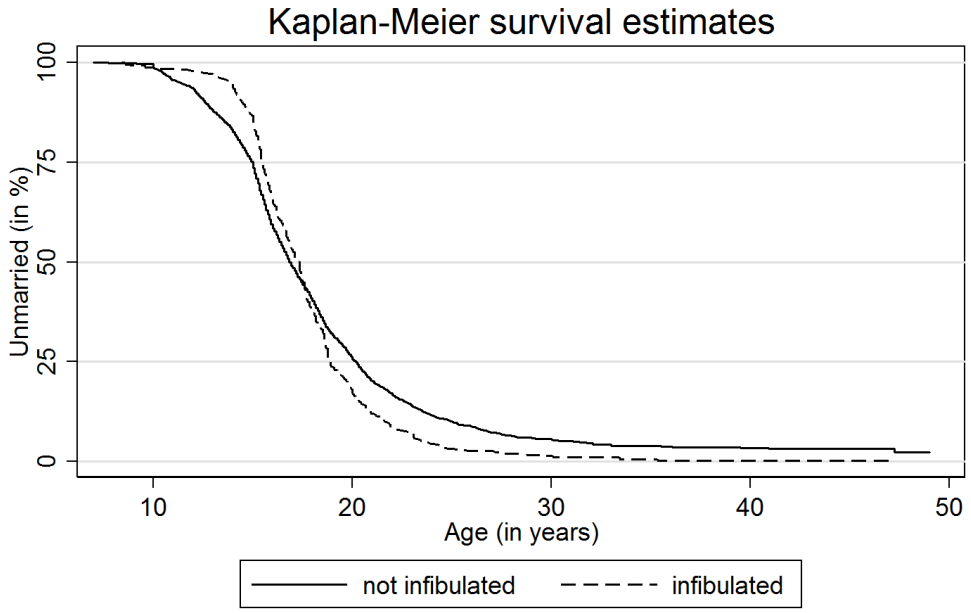



Figure 3.1.3: Share of unmarried girls by age in Ethiopia

gone infibulation have a lower hazard of early marriage compared to uncut girls, as shown by the fact that the survival rate of cut girls (dashed line) is higher during early teenage years relative to the survival rate of uncut girls (solid line). Hence, at a first glance this figure is in line with the hypothesis that cut girls (or their parents) face lower pressure for early marriage since infibulation dampens the risk of premarital sex. However, this conclusion is premature and results from not taking into account the religious affiliation of the observed women. The two most

| Dep. Variable: | (1) | (2) | (3) |
|---|---|---|---|
| Married before the age of 16 | I | II | III |
| Infibulation (y/n) | -0.342 | -0.346 | 0.0259 |
| | [0.143]** | [0.147]** | [0.161] |
| Year of birth | -0.0592 | -0.0582 | -0.0587 |
| | [0.00271]*** | [0.00266]*** | [0.00263]*** |
| Rural residence (y/n) | | 0.536 | 0.697 |
| | | [0.103]*** | [0.115]*** |
| Orthodox (y/n) | | | 0.765 |
| | | | [0.110]*** |
| Const. included | yes | yes | yes |
| Observations | 15,367 | 15,367 | 15,367 |
| Number of strata | 21 | 21 | 21 |
| Number of PSUs | 539 | 539 | 539 |

SE in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table 3.1: Logistic regression.

common religious affiliations in Ethiopia are Christian (orthodox) and Muslim and while infibulation is much more common in muslim communities (although also practiced among members of other religions), orthodox girls in our sample on average marry earlier than their Muslim peers. To make this point clearer, we create a dummy variable indicating whether a girl was married before her 16th birthday and run a logistic regression, in which we progressively add more regressors. Table 3.1 reports the results. Column I shows that infibulation significantly predicts later marriage if we do not control for the religious background of the women. This result is robust to controlling for cohort effects, which we find are significant too. The older a women in our sample, the likelier it is that she was married before the age of sixteen. Next, we control for urban vs. rural residence, which leaves the coefficient for infibulation unchanged. Finally, in column III, we include a dummy for orthodox religion, which we find to be highly predictive of early marriage and which renders the coefficient for infibulation insignificant. A concern might be that we were not able to uncover an existing link between infibulation and early marriage because the number of infibulated girls is rather low in Ehtiopia. We therefore turn to Sudan, a country with one of the highest rates of infibulation (Caplan, 1981). Figure 3.1.4 shows the results from a similar survival analysis based on a sample of unmarried Sudanese girls from the 1989/1990 De-

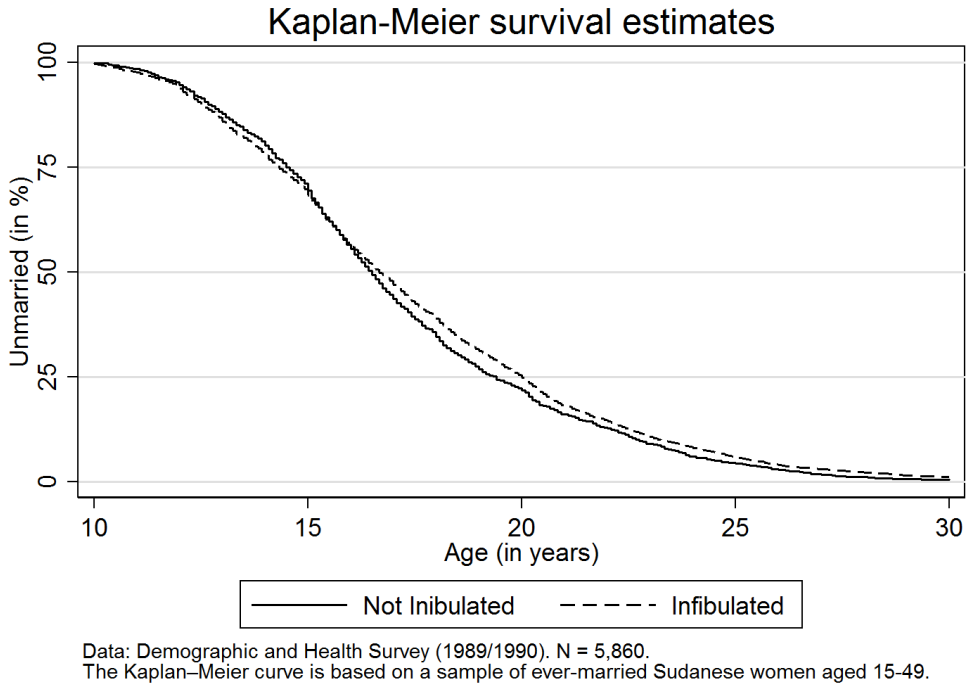



Figure 3.1.4: Share of unmarried girls by age in Sudan

mographic Health Survey [3]. The average age at marriage in our sample is 16.8 and the share of women that have undergone FGC type III is 74%. We find that the survival functions are extremely similar for both cut and uncut girls, which suggests that being cut does not affect the timing of marriage in our sample.

**Post-marital residence** In the literature about the contemporary practice of child marriage, post-marital living arrangements and related inter-generational power relations have received only very limited attention. A more through analysis of how parental influence on the timing of marriage depends on prevailing norms around living arrangements may however prove insightful.

Traditional norms and practices dictate whether newly-weds typically reside in proximity to the husband's natal household (patrilocal), the wife's natal household (matrilocal), or whether the young couple is expected to establish a new house-

[3] As opposed to the data for Ethiopia, the target population of this DHS survey is ever-married women aged 15–49 and excludes unmarried girls. Hence, there is no need for right-censoring. However, among the younger women only those who had married young have a chance of ending up in our sample, which means that we no longer have a representative sample of married women.

hold separately from that of any parent (neolocal). These traditional norms regarding post-marital residence may strongly affect the power relations between parents and children, as well as between the spouses. In patrilocal societies, the bride traditionally moves in with her husband's parents and is often expected to take over some of the household work previously done by the mother-in-law. Hence, post-marital residence affects whether daughters-in-law become important economic assets for the groom's parents, which may in term affect the timing of marriage. For example, there is anecdotal evidence that mothers in patrilocal societies prefer younger brides for their sons because a large age gap allows them to exert more informal power over their daughters-in-law. If this is really the case, then child marriage may reflect the mother-in-law's desire for a young bride rather than her sons own preference. Neolocality may in this context raise the age at marriage by virtue of weakening the influence of the older generation. In fact, section 3.1.1.1.3 of this desk review makes the case that the educational level of parents-in-law in Bangladesh – a patrilocal society – influences the age-at-marriage of their sons' bride.

**Potential lessons from history?** In the literature on child marriage, the question of post-marital residence has received very limited attention. However, history provides an intriguing example of a geographical association between delayed marriage and neolocal residence. The so so-called (Western) European Marriage Pattern is a historical demographic regularity characterized by high (female) age at marriage, a small spousal age gap, a significant share of never-married elderly, and neolocal residence. The origins of the European marriage pattern date back at least to the sixteenth century and its geographic scope is confined to Europe west of the so-called Hajnal line, which connects St. Petersburg and Trieste (Hajnal, 1965). Strikingly, the average female age at first marriage in 17th century UK and Germany for example was somewhat above 25, which is higher than the typical age at marriage throughout large parts of the 20th century (Flinn (1981) as cited in Voigtländer and Voth (2013)). Hence, the European Marriage Pattern may be informative in the context of the literature on child marriage, since it clearly demonstrates that early marriage is not a necessary consequence of low levels of education and widespread poverty – two conditions that certainly also apply to 16th century Europe.

The emergence of the European Marriage Pattern has been credited to the Catholic Church's promotion of consensus-based unions, but also to fundamental changes in the structure of the economy. The observed transition of nuptiality towards higher ages at marriage coincides with the growth of labour markets and

increasing dependence on wage income. Especially the integration of women in the labor market may have played an important role. Voigtländer and Voth (2013) argue that the high age at marriage is a consequence of enhanced female employment prospects. Higher land-labor ratios in the aftermath of the Black Death and a comparative advantage of women in pastoral farming raised the demand for female labor and induced young women to work as servants in animal husbandry before getting married. Moreover, it has been argued that the access to labor markets fundamentally affected the power relation between generation, which may in turn have had consequences on younger generations decisions regarding marriage timing. Wage income reduced dependence on the parental home and the increased mobility associated with participation in the labor market is believed to have led to generally weakened control of parents over the life of their children. In line with these developments, the consensual marriages became the most prevalent type of union replacing arranged marriages. Interestingly, the same rise in the age at marriage could not be observed among the upper classes, where managing the generational transmission of family property presumably played a more important role and arranged unions remained the norm (De Moor & Van Zanden, 2010).

#### 3.1.1.1.3 Education

There exists convincing evidence suggesting that higher levels of education can indeed help to delay a girl's typical age at marriage. The causal chain through which education affects the timing of marriage is however less clear. A large strand of the literature posits that education of girls leads to enhanced autonomy and negotiating skills as well as higher professional aspirations. In this section, we try to demonstrate empirically that a more mechanistic relationship between education and the age at marriage may also account for some of the correlation. Furthermore, this section makes the case the educational attainments in one generation may affect the age at marriage of girls in the next generation.

**The education of prospective brides** Girls with fewer years of formal education have on average married at a younger age relative to those who achieved higher education levels (UNICEF, 2007). Simple correlations however may not be causal and can often be attributed (partly or entirely) to the influence of third factors, such as urban residence or household wealth that are believed to affect both education levels and the age at marriage. For example, a correlation between the age at marriage and school attainment may emerge even in the absence of any

causal effect of education, if poorer parents face stronger incentives to marry of their daughters early in order to alleviate the household's consumption burden and the same lack of financial resources had previously also forced them to take out their daughters of school. Nevertheless, while some of the correlation may indeed be attributed to third factors, a strong and robust association between educational attainment and the age at marriage has been repeatedly found to exist in most countries even if the influence of third factors is controlled for (UNICEF, 2005).

Many projects and interventions in the not-for-profit and government sector explicitly or implicitly assume that education affects the timing of marriage through girls' empowerment, which induces prospective brides to adopt intrinsic motivations for delaying wedlock. A number of academic papers share this point of view and argue that education leads to improved autonomy, negotiating skills, and increased aspirations of girls, which in turn lowers the risk of child marriage (see for example Amin, Ahmed, Saha, Hossain, and Haque (2016); International Center for Research on Women (2007); Lloyd and Mensch (1999)). However, it is at the same time also generally acknowledged that continued school attendance after wedlock is in many contexts traditionally discouraged and girls therefore typically drop out of school when they get married (Baird et al., 2011; Duflo et al., 2015; Osili & Long, 2008; Parsons et al., 2015). Hence, it is not clear ex-ante through which mechanism education affects the timing of marriage. In fact, in section 2.1.1 of this desk review, we have even discussed evidence for a (reverse) causal effect of early marriage on educational attainment. It is important to note that the expected effectiveness of interventions often crucially hinges on the presumed causal mechanisms. In particular, if an education-based intervention is designed to delay the marriage of girls who no longer attend school, then the incompatibility of marriage and school attendance will not be enough to ensure the desired results and the extent to which education leads to long-lasting empowerment of girls will be crucial.

**Evidence from intervention studies**

The most compelling source of evidence for a causal effect of educational empowerment on the typical age at marriage stems from interventions that aim at reducing the incidence of early marriage through fostering school attendance or improving the quality of education. While a number of such interventions have been conducted across different countries, only few of these programs include a control group and assign the treatment randomly, such that the results can be interpreted as showing a causal nexus between education and early marriage.

Overall, the more rigorously evaluated programs suggest that more education indeed helps to delay the timing of marriage.

The *Berhane Hewan Program*[4] was a package of interventions carried out in rural Ethiopia over the period 2004-2006 with the aim of reducing the prevalence of child marriage. The treatment comprised regular meetings of adolescent girls in groups led by female mentors, giving in-kind support (free provision of school material worth US$ 4 over the course of a year) to girls if they stay in school, offering non-formal training in livelihoods skills, organizing community-level discussions on early marriage and reproductive health, and offering rewards (a goat worth US$ 20) for families if they do not marry off their daughter during the project period. Hence, the program was both designed around strengthening girls' empowerment (assignment of female mentors, training in livelihood skills) as well as around shaping incentives for school attendance (free provision of school material). Unfortunately, the study employed a quasi-experimental design with only one treatment and control village each and the results must therefore be taken with a grain of salt. Keeping this limitation in mind, the findings are nevertheless interesting. In the treatment village, the rate of child marriages among girls aged 10-14 strongly declined over the project period, while the same change could not be observed in the control village. Interestingly however, the data suggest that marriages in the treatment village were simply delayed into later phases of childhood and the intervention failed in pushing the typical age at marriage beyond the 18th birthday. Hence, the evaluation of the Behrhane Hewan Program suggests that a combination of interventions (as described above) may effectively reduce the incidence of child marriage among young girls. However, the design of the study does not allow to clearly identify the mechanisms through which the timing of marriage was affected.

The *Maharashtra life skills program (1998-1999)*[5] tested the effectiveness of non-formal education and empowerment of unmarried girls on the age at marriage in a rural India. The treatment consisted of one-year weekly life skills classes covering civic education, sexual health, and basic literacy. Moreover, the program actively tried to involve parents and other community members through regular workshops. The program was large in scale. Out of a total of 71 geographical units (each comprising a populations of 1,000-1,5000) on which data was collected both before and after the program, 17 were included in the life skills program. However, these 17 geographical units were not chosen randomly from the

[4] See A. S. Erulkar and Muthengi (2007) and A. S. Erulkar and Muthengi (2009).
[5] See Rohini Pande, Kathleen Kurz, Sunayana Walia, Kerry MacQuarrie, and Jain (2006).

total of 71 units, but instead all the villages included in the program were located within a larger *program area* consisting of a total of 35 neighboring geographical units, while the remaining 36 geographical units were located in another non-contiguous *control area*, in which no village was covered by the program. After one year, typical marriage timing shifted towards later ages in the program area, while it remained constant in the control area. However, given that treatment was not assigned randomly at the village level, the results could also be driven by other developments that are specific to the larger *program area*. Hence, as with the Berhanee Hewan progran, while the findings are promising and may indicate that empowerment of girls through education may help to delay marriage, the quasi-experimental design of the study does only partially allow for causal inference and the results should therefore taken with a grain of salt.

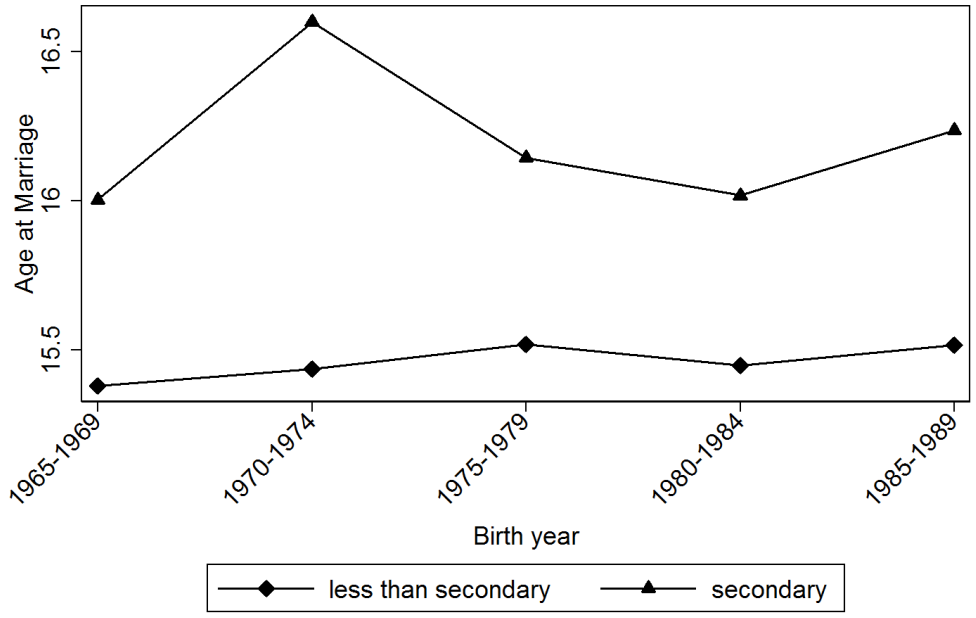
Duflo, Dupas, Kremer, and Sinei (2007) report results from a randomized controlled trial based on a large sample of 328 schools in rural Kenya involving a treatment arm that reduced the costs of education by paying for school uniforms. The authors find that the treatment significantly lowered the risk of child marriage. More precisely, girls in schools where free uniforms were provided are 2.5 percentage points (or 15%) less likely to have dropped out of school and 1.4 percentage points (or 12%) less likely to have married during the intervention period. Overall, these results may be interpreted as showing that the reduced costs of educations created incentives to delay marriage. The authors themselves credit the effect of education on the timing of marriage to alleged societal pressures that make school attendance and marriage incompatible in the context of Kenya.

Baird, Chirwa, McIntosh, and Özler (2010) report the results from a large-scale cash transfer program conditional on school attendance that was conducted among girls aged 13-22 in Malawi. The conditional cash transfer was offered to all girls irrespective of whether they had attended school before the onset of the intervention. The study finds that girls who returned to school had a 40% lower marriage rate during the first year of the intervention relative to girls who were not offered any payment. However, no significant effect of the conditional cash transfer was found for girls who already attended school at the onset of the intervention. This finding suggests that returning to school offers effective protection against early marriage. In a second paper, Baird et al. (2011) study the relative effectiveness of conditional vs. unconditional cash transfers in preventing early marriage and we discuss their findings in section 3.1.2.2.2.

**Empirical analysis using MICS data**

We will now try to re-assess the effect of education on the risk of child mar-

riage using data for Bangladesh from the UNICEF Multiple Indicator Cluster Surveys (MICS). This will allow us to reconsider the question of whether education delays marriage predominately through girls' empowerment. In a first step, we reconfirm that there is a strong association between education levels and the timing of marriage. Figure 3.1.5 shows the average age at marriage for different age

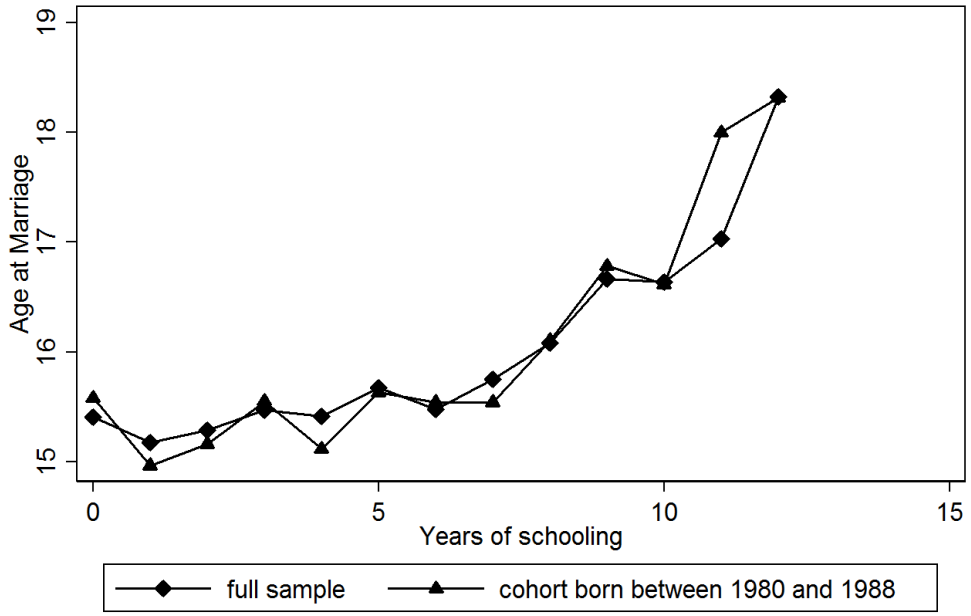



UNICEF MICS5 data for Bangladesh. N = 13,059. The figure is based on a sample of girls aged 25-49. Marriages before the age of 6 or after the age of 27 are considered outlieres and are not included in this figure.

Figure 3.1.5: Age at marriage and years of schooling

cohorts of Bangladeshi women depending on whether or not they have attended secondary education. Irrespective of the birth year, women with some years of secondary education have on average married at a higher age compared to their peers without secondary education.

Next, we want to ask whether it is girls' empowerment through education, which alters their intrinsic motivations and induces them to marry later or whether it is rather the incompatibility of school attendance and marriage that gives rise to the observed statistical pattern. Note that if the mechanistic relationship is the primary driver, then we would expect the association between years of schooling and age at marriage to be especially pronounced among girls with higher education levels, since these girls still attended school at an age when marriage was a viable alternative. On the other side, during the first years at school, girls are




UNICEF MICS5 data for Bangladesh. N = 13,059. The figure is based on a sample of girls aged 25-49. Marriages before the age of 6 or after the age of 27 are considered outlieres and are not included in this figure.

Figure 3.1.6: Age at marriage and years of schooling

still below the typical marriage age and school attendance therefore should not interfere with marriage plans. Figure 3.1.6 shows the average age at marriage of Bangladeshi women aged 25-59 for different numbers of attended school years. We excluded women under the age of 25 to ensure that every individual in our sample had completed her educational history. We find that the association between the timing of marriage and the level of education is strongest for girls with at least six years of schooling or more, which coincides with the age at which girls in our sample start to get married and attending school therefore becomes a potential hindrance to wedlock. Interestingly, the association between more years of schooling and a higher age at marriage is much weaker for girls with fewer years of schooling where one additional year of school attendance matters little for a girl's age at marriage. In the context of arguments that stress the empowering effect of education, this finding is surprising. In fact, one might expect the empowering effect of education to be especially large during the first years of schooling, which equip girls with basic literacy and numeracy [6]. We find

[6] It is in principle also possible that the empowering effect of schooling only kicks in at higher classes, potentially because higher education enhances the labor market prospects. See section

a very similar pattern if we restrict our sample to women born between 1980 and 1988 (the youngest cohort in our sample), which suggests that our result is not driven by a global age effect with older women in our sample having on average married at a younger age while also on average having attended fewer years of schooling. Hence, based on the data from Bangladesh it is possible to argue that while education indeed relates to the timing of marriage, it may be the mere attendance of school rather than the acquired information and skills that prevent girls from getting married early. However, such a conclusion requires a more extensive empirical analysis and future research about the relative importance of education-based empowerment of girls will be certainly valuable.

**The education of parents and parents-in-law** In many contexts marriages are arranged by the older generation and only partially reflect the choices of the married couple. Hence, it may be characteristics of the bride's parents that determine the timing of marriage rather than the motivations and beliefs of the bride herself. This argument is especially relevant in the context of child marriage where the bride is typically too young to have a strong influence on the marriage arrangement and her motivations and desires will therefore often be overruled. Hence, to understand the causes and drivers of child marriage, it is important to focus not only on the bride herself, but moreover to take into account the motivations and beliefs of her parents and prospective parents-in-law.

In patrilocal societies, girls leave their parents' household in order to live with their husband's family after wedlock and often times women are expected to take over some of the household work previously performed by their mothers-in-law. Hence, brides may become an important economic asset for the groom's parents. As a consequence, parents-in-law themselves will take an interest in decisions, such as the timing of marriage or when to begin childbearing.

In a intriguing paper, Bates, Maselko, and Schuler (2007) test the hypothesis that educational attainment of women in one generation affects the timing of marriage of girls in the next generation, since women of the older generation may exert considerable influence in their roles as mothers or mothers-in-law. Women who have enjoyed higher education may for example hold different views regarding the appropriate timing of marriage relative to women who did not attend school and these diverging opinions may then influence the marriage arrangements for a daughter or the search criteria regarding an appropriate bride for a son. The study is set in rural Bangladesh where, according to the authors,

3.1.2.2.2 for a discussion of how labor market conditions can affect the age at marriage.

mothers-in-law exercise extensive informal power over their daughters-in-law. Based on a sample of 432 women (with at least one daughter above the age of 10) from 6 different villages, data regarding age and education was collected alongside information about their daughters age, education, and age at marriage. The obtained results suggest that a mother's education attainment positively affects her daughter's age at marriage. A similar kind of analysis is conducted with respect to the education level of the mothers-in-law. Again, mothers-in-law with more years of schooling are associated with a higher age at marriage of their daughters-in-law. Moreover, the education level of mothers-in-law is positively associated with age at first birth of their daughters-in-law when controlling for age of daughters-in-law at time of marriage, which suggests that the educational background of mothers-in-law also affects for how long the contraception of the first child is delayed after getting married. Hence, a girl's marriage and fertility decisions may not only be affected by observable characteristics of her own mother, but additionally by those of her future mother-in-law. Consequently, intervention programs that aim at shaping the social norms or economic incentives of those people who ultimately decide over a girl's marriage choice must not only consider the native parents but also take into account the perspective of future parents-in-law.

**Empirical analysis using MICS data**

An important question however remains unanswered. Does the association between a girl's age at marriage and the education level of her mother-in-law really mean that educated women prefer their sons to marry older brides? Or is it rather the case that the educational level of a mother only predicts her son's age at marriage and the association between the mother's educational attainment and her daughter-in-law's age at marriage is simply driven by the fact that older grooms on average marry older brides? Here, we try to replicate the findings in Bates et al. (2007) using MICS data from Bangladesh, while controlling for the son's age at marriage. This allows us to ask, whether in the educational attainment of parents predicts their daughter-in-law's age at marriage even if their son's age at marriage is held constant. Furthermore, we do not limit our analysis to *mothers*-in-law, but study more generally how the educational level of *parents*-in-law may predict their daughter-in-law's age at marriage. More specifically, we run a logistic regression where the dependent variable indicates whether the daughter-in-law was married before her 16th birthday. In this regression, we include the education of the daughter-in-law, the age of the household head, the calendar year of marriage, household wealth, rural vs. urban residence. Finally,

| | | |
|---|---|---|
| Logistic regression | Number of obs | = 2780 |
| | Wald chi2(12) | = 500.28 |
| | Prob > chi2 | = 0.0000 |
| Log pseudo-likelihood = -1312.3431 | Pseudo R2 | = 0.2428 |
| Dep. Variable: Married before the age of 16 | | |
| Household head attended school (y/n) | | -.214 [.105]** |
| Attended school (y/n) | | -.202 [.143] |
| Birth year of household head | | .014 [.006]** |
| Year of marriage | | -.169 [.012]*** |
| Age at marriage of husband | | -.155 [.014]*** |
| Rural residence | | .165 [.120] |
| Composite household wealth index | | -.199 [.060]*** |
| Region fixed effects | | yes |

SE in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table 3.2: UNICEF 2006 MICS data for Bangladesh. The regression covers women aged 22-49. We have treated all marriages where the bride's age at marriage is either below 6 or above 25 years as outliers.

we also control for the husband's age at marriage. Since there are large differences in the typical age at marriage across regions, we furthermore include a set of region dummies. Table 3.2 reports the results. We find that the regressor for the household head's education level is negative and significant despite the fact that we have controlled for the husband's age at marriage, which suggests that the association between a parent's education level and the daughter-in-law's age at marriage is not (entirely) explained by the son's age at marriage.

**Caveat:** By construction, we observe only married girls who live with their

parents-in-law at the time of the survey. Hence, this may not be a representative sample of all married couples and it is an open question whether the results would be derived if the study was based on women who live with their husbands in a nuclear household.

### 3.1.2 Extrinsic motivations

Behavior is not only affected by intrinsic motivations. Social sanctions and economic incentives may also affect decisions around child marriage.

#### 3.1.2.1 Social sanctions

##### 3.1.2.1.1 Traditions

**The spousal age gap** In many societies where female child marriage is common, men typically marry at a much higher age than women. Hence, interventions that reduce the spousal age gap while keeping male age at marriage constant may thus significantly reduce the prevalence of child marriage. Future research into *male* age at marriage, the determinants of the spousal age gaps and how this relates to early marriage may therefore prove highly valuable.

Many societies have developed norms about the socially acceptable range of spousal age gaps, i.e. the difference of the age at marriage of husband and wife that is considered appropriate. These social "rules" may vary considerably across different cultures in terms of content and the level of enforcement. Such rules are rarely legally binding, but couples that violate the social norm may in some cases suffer from informal sanctions like gossip or ostracism. Anticipation of these social sanctions may in turn create incentives to choose a spouse in the socially accepted age range.

Are spousal age gaps relevant in the context of child marriage? While male age at marriage per se has received much less attention than female marriage timing, it has repeatedly been noted that there exists a correlation between female age at marriage and the spousal age difference. Countries with a high prevalence of child marriage are also those, in which men marry at a much older age than their wives (Lloyd & Others, 2005). This relationship also holds true within countries. In a large-scale statistical exploration, UNICEF (2005) finds that in 44 out of 50 examined countries women who are more than four years younger than their partners are significantly more likely to have married before their 18th birthday relative to women who live in a union characterized by a more narrow spousal age

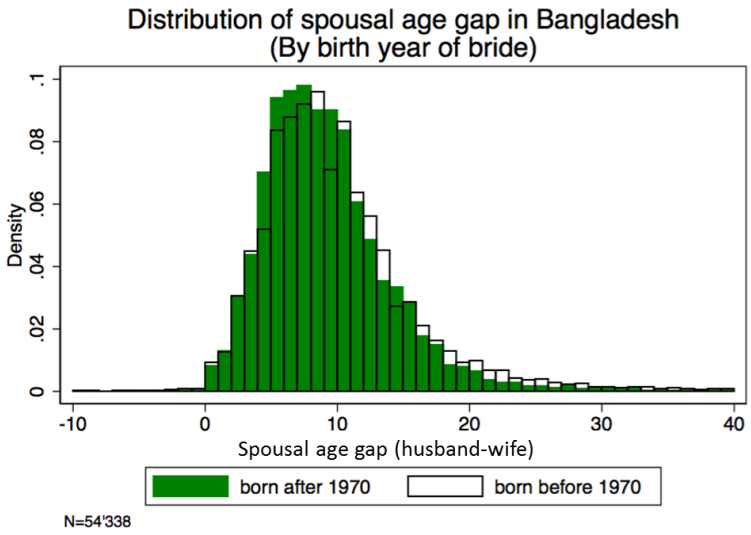



Figure 3.1.7: Source: UNICEF 2006 MICS data for Bangladesh. The data covers marriages between men of any age and women aged 15-49 at the time of the survey.

gap. However, it is important to note that a correlation between the female (or male) age at marriage and the spousal age gap will emerge by construction even in the absence of any underlying preference for the age of a spouse or the age differential in a marriage. Put differently, even if each individual's age at marriage was determined by an independent random draw from the respective sex-specific distributions of ages at marriage, we would still expect a negative association between female age at marriage and the spousal age gap to exist in any society where men on average marry at an older age than women (Casterline et al., 1986).

However, it is interesting to ask whether some spousal age gaps are clearly preferred over others and to what extent the age at marriage of a given groom correlates with the age at marriage of his wife. Figure 3.1.7 shows the distribution of spousal age differences in Bangladesh for women born before and after 1970 respectively. Clearly, there is a very strong tendency to avoid marriage where the bride is older than the groom. On the other side, no such clear pattern of avoidance is recognizable for large spousal age gaps. We find that in more recent marriages (women born after 1970), the distribution of spousal age gaps is slightly less right-skewed reflecting that large spousal age gaps have become less widespread. However, the differences between the pre- and post-1970 distribu-

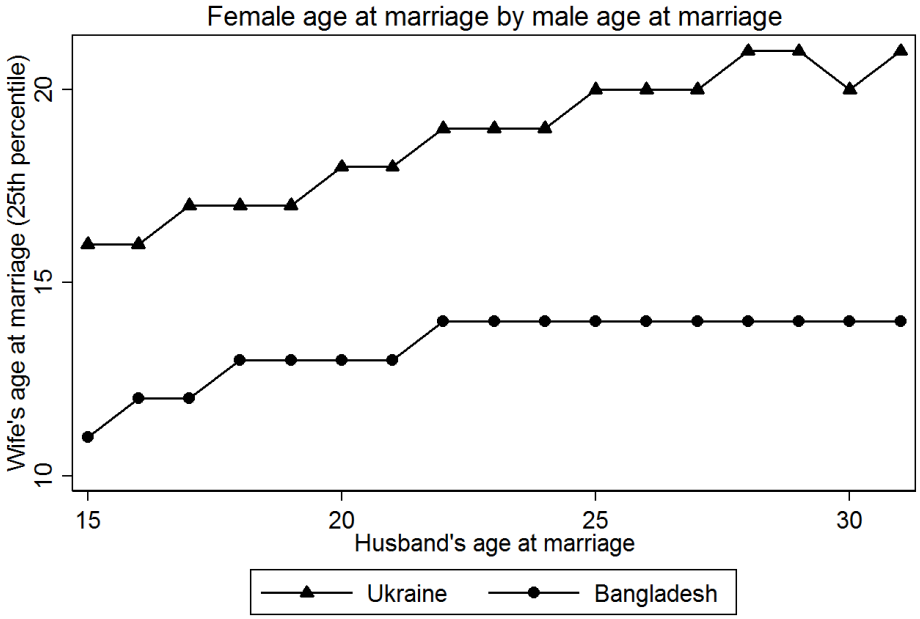



Figure 3.1.8: Female age at marriage by male age at marriage

tions are not very pronounced.

The fact that large spousal age gaps seem to to be strictly avoided in the Bangladeshi data can be more clearly seen in figure, which plot the first quartile of female age at marriage for a broad range of male ages at marriage. Comparing Bangladesh to a country with low prevalence of child marriage – Ukraine – we find that the first quartile of the brides' age at marriage in both countries initially rises in the age of the groom. While this association persists in the Ukrainian data, it breaks down in the Bangladeshi sample and the first quartile of female age at marriage remains low even for older grooms.

This implies that it is equally likely for both a thirty years old groom and a twenty-three years old groom in our Bangladeshi sample to have married a girl under the age of fifteen. A speculative explanation for this is that large spousal age gaps may be subject to more severe social sanctions in Ukraine relative to Bangladesh.

#### 3.1.2.2 Economic incentives

This section deals with economic incentives for and against the practice of child marriages. Economic incentives are rooted in the social and economics environment rather than the intrinsic motivations of the decision maker.

##### 3.1.2.2.1 Dowry & Bride price

Dowry and bride prices are among the most often cited potential drivers of child marriage. However, the debate about the nature (and relatedly the causes) of these marriage payments is far from being settled. An important lesson from the literature is that there exists a variety of motives for marriage payments and determining the nature of the transaction at hand must be integral part of any research on dowries, bride prices and their effect on early marriage.

Payments between the respective families of the bride and the groom at the time of marriage have been a cultural practice in most societies over the course of history. The prevalence, size, and direction of such payments however varies both between countries and across time. For example, while there is evidence of a dowry system in ancient Greece and Rome, this practice ended when Germanic traditions (including bride price rather than dowry payments) became prevalent in Europe. However, in the late Middle Ages, dowry had a successful comeback in Europe and was reinstalled across most social classes (Anderson, 2007). Today, dowry payments are on the rise in South Asia, including in Bangladesh. Finally, in some regions (e.g. Northeast Asia) bride prices and dowries traditionally coexist, which suggests that dowries may not simply be a "negative bride price" (Parish & Willis, 1993). Figure 3.1.9 shows the net flow of assets between the families of the groom and the bride observed today. Most African and Asian countries (except for South Asia) are among the countries where wealth is transferred from the groom's to the bride's family.

Both bride prices and dowries have been cited as important incentives for early marriage. More precisely, it may be challenging for poorer families to raise sufficient funds for their daughter's dowry and good opportunities for marriage (i.e. low dowry requests) may therefore be accepted as they come along even when the daughter is still very young. Moreover, younger brides often have to pay lower dowry relative to older brides, presumably because the youth of the former is associated with beauty, virginity, fertility, or obedience (Elizabeth Yarrow et al., 2015). Hence, parents may have incentives to marry off their daugh-

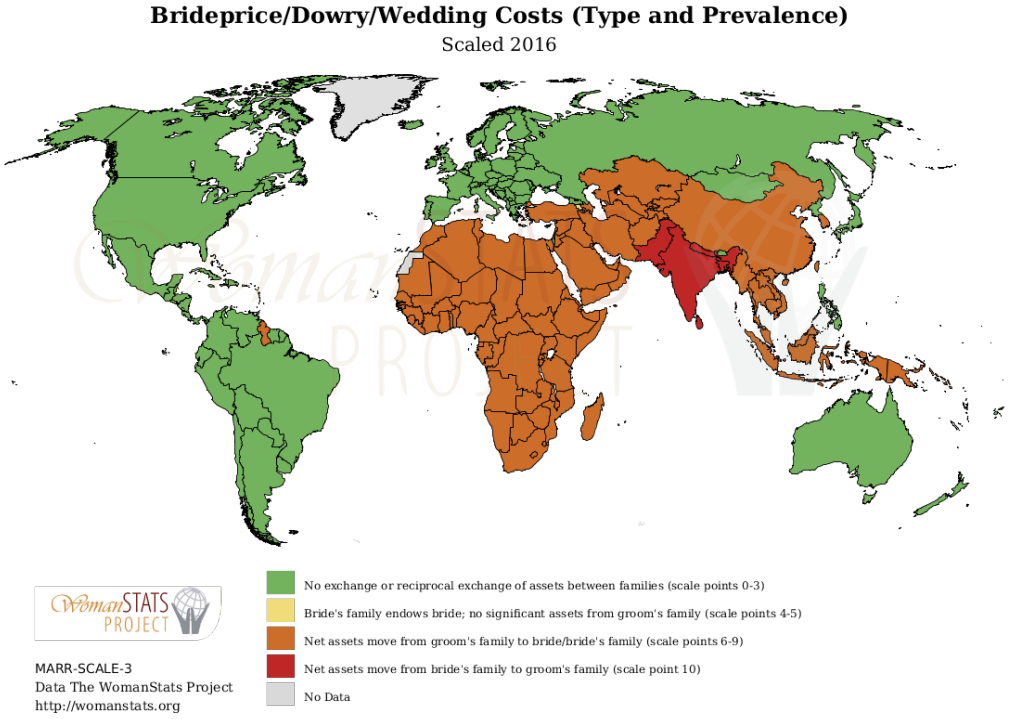



Figure 3.1.9: Source: WomanStats Project.

ters early, since this means both lower dowries and one less mouth to feed.

Similar arguments hold for bride prices. Corno and Voena (2016) find that adverse economic shocks, including flood or drought, to the family of a young girl increase her probability of getting married, which suggests that girls may be "sold off" to overcome an unexpected financial bottleneck.

**Dowry**

The nature and causes of dowry payments are disputed. At least since (Becker, 1981), economists have often modeled dowries as a (groom-) price that is needed to clear the marriage market. This view has motivated some influential explanations for the emergence of dowry payments, such as the so-called "marriage squeeze": Population growth leads to a relative increase in the share of younger people in a population and – because women tend to marry younger than men – to an excess of women in the marriage market. It has been argued that this marriage squeeze may explain the rising dowry payments in South Asia over the past decades (Rao, 1993). Alternatively, economic development leads to greater heterogeneity in terms of wages and dowries can emerge as a means to compete for high-quality grooms (Anderson, 2003). However, the notion of dowry

as a market-clearing groom price is being challenged by competing theories that model dowries as pre-mortem bequests. Maristella Botticini (2003) argue that dowries arise as an alternative to bequest at death, since (in patrilocal settings) brides move to the household of their in-laws while sons continue to contribute to their native parents' household property. Granting girls a fixed share of the parents' property at death would allow them to free-ride on their brothers' efforts to multiply the parents' wealth. Dowries as pre-mortem bequest may therefore be a solution to the threat of underinvestment into the household property by the sons. Zhang and Chan (1999) also treat dowries as pre-mortem bequests and moreover assume that the dowry is a property that remains under the wife's control. The authors then show with microdata from Taiwan that a dowry improves the bride's position in the household. The paper argues that the coexistence of bride-prices and dowries in Taiwan may be explained by the complementary functions they serve. While bride prices paid to the parents clear the market, dowries may often become the property of the bride and are therefore a way for parents to ensure the well-being of their daughter after marriage.

**Dowries vs dower** Note that the interpretation of dowries as an insurance has some similarity to the function of a *dower* or a *mahr*. A dower is a transaction by a husband or his family to the wife for her support in case of the husband's death and was widely practiced in Europe. Similarly, in Muslim marriages, a *mahr* denotes the mandatory transaction from the groom's family to the bride at the time of the marriage, which (as opposed to the bride price) becomes her property and is supposed to insure her against divorce and maltreatment. Nevertheless, a decisive difference is that the paying party in the case of dowries is the bride's rather than the husband's family.

**Dowries and education** The relation between education and dowry levels is also disputed. Literacy has been found to be negatively associated with the level of dowry payment in India suggesting that men value literacy in brides (Jere R. Behrman, Andrew D. Foster, Mark R. Rosenweig, & Vashishtha, 1999). However, other studies have found that the amount of dowry that a girls has to pay at her wedding increases in the years of schooling when controlling for personal characteristics such as age of both the groom and the bride (A. R. Chowdhury, 2010; Dalmia, 2004). A possible explanation for the positive association between education and the size of dowry might also be that family wealth is only poorly measured. In this case, when dowry payments are regressed on various observables, the education regressor may pick up some of the effect of family wealth. However, even if education ceteris paribus lowers the amount of dowry to be

paid, the net effect of more years of schooling is ambiguous. Since younger girls have been shown to require lower dowries, increased schooling will indirectly raise the dowry through the older age at marriage.

**Bride price** Bride prices have received less attention than dowry payments in the economic literature. In an insightful paper, Nava Ashraf, Natalie Bau, Nathan Nunn, and Voena (2015) revisit a large and often studied school construction program in Indonesia (1974-1980) and find that the treatment increases female school enrollment only among those ethnic groups that traditionally engage in pride price payments. The reason seems to be that girls with more years of schooling commanded a higher bride price, which provides parents with an incentive to invest in their daughters education. These finding are confirmed with data from Zambia, suggesting that in these two regions education is indeed valued in brides.

#### 3.1.2.2.2 Economic conditions

The financial situations of parents with marriageable daughters and the economic prospects of young girls may both affect the timing of marriage. This sections will discuss these potential drivers of early marriage in turn.

**Poverty** Independent of the aggregate economic performance of a given country, girls from low-income families are more likely to be affected by child marriage than their peers growing up in wealthier families (UNICEF, 2005). It is often argued that daughters may be considered a financial burden to their families. Hence, parents may have an incentive to marry off their daughter early as this implies that they have one less mouth to feed (Sanyukta Mathur et al., 2003), in particular in times of economic shortage (Corno & Voena, 2016). At the same time, early marriage itself is believed to be a driver of poverty due to its depressing effect on educational attainment and labor force participation. Hence, poverty and early marriage may mutually reinforce each other in a vicious cycle (Handa et al., 2015; Parsons et al., 2015).

**Important lessons from the literature**

Despite the well-documented association between a low household wealth and early marriage, it is nevertheless difficult to infer a causal relationship since poverty is often measured imprecisely and more importantly often associated with other drivers of early marriage such as low educational attainment. The most reliable source for the identification of a causal nexus between a household's financial situation and the timing of marriage stems from experimental

studies. Baird et al. (2011) report the results from a large-scale cash transfer program conducted among school girls aged 13-22 in Malawi, which provides causal evidence that a girl's risk of marriage may indeed be related to the financial situation of her household[7]. The intervention comprised two treatment arms. A random subsample of the girls received cash transfers conditional on continued school attendance, while others were promised to receive the money irrespective of whether or not they would drop out of school. The main result is that while the *conditional* cash transfer did not affect the marriage rate, girls who received unconditional offers were significantly less likely to marry during the intervention period. This result is driven by the fact that girls who dropped out of school but kept receiving the money had a roughly 50% lower marriage rate compared to dropouts in the conditional cash transfer arm who no longer received the transfer and who married at a rate similar to that of girls in the control who were never promised any payment in the first place. On the other hand, the vast majority of girls who continued to attend school remained unmarried irrespective of whether or not they had been offered a cash payment. Hence, the conditional cash transfer could affect the marriage rate only indirectly by fostering school attendance and while indeed fewer girls dropped out school in this treatment arm, the effect was too small to trigger sizable changes in the marriage rate that could have been detected statistically. There are (at least) two important insights to be gained from this study. First, the sizable reduction in the marriage rate of girls who dropped out of school but kept receiving an unconditional cash transfer strongly suggest that this additional income played a crucial role in averting marriage. In particular, the enhanced financial situation allowed for delayed marriages in spite of the fact that girls had dropped out of school and were therefore no longer shielded from marriage by the often cited incompatibility of school attendance and married life. Second, while the results from this study are compatible with interventions that aim at reducing the prevalence of child marriage by fostering school attendance, they suggest that there might be scenarios in which it is more effective to directly target the financial situation of girls who have dropped out of school.

**Labor market opportunities** Whether or not the labor market offers young women well-paying jobs crucially shapes the incentives involved when deciding on the timing of marriage (Becker, 1981). This is especially true for contexts in which married women are expected to take on household roles, such that only premar-

[7] Note that in contrast to the study in Baird et al. (2010) (discussed in section 3.1.1.1.3), here the focus is on schoolgirls and no payments were offered to girls who did not attend school at baseline.

ital labor market participation may be more feasible and marriage comes at the opportunity cost of giving up wage income. Moreover, exposure to formal work environments with personal wage payments and the mobility associated with employment outside of the home may arguably have empowering effect on girls, which can induce them to postpone their marriage. F. I. Chowdhury and Trovato (1994) for example study the interaction between female premarital work histories and female age at marriage in the five Asian countries of Bangladesh, Pakistan, Nepal, Sri Lanka, and Malaysia and find that not only pre-marital work in general predicts a higher age at marriage, but moreover the effect is largest for girls who worked in cash oriented jobs instead of being employed in family enterprises. However, similar to the discussion of the relationship between education and early marriage in section 3.1.1.1.3, also here causality is a delicate issue. A correlation between age at marriage and premarital employment can also arise if girls take up work as a *result* of not yet having found a suitable groom. Again, the most reliable source of evidence for a causal effect of labor market opportunities on female age at marriage stems from interventions that modify the landscape of work possibilities for girls.

**Important lessons from the literature**

In a seminal paper, Jensen (2012) assesses the causal impact of enhanced labor market opportunities on young women's marriage and fertility decision by conducting a randomized experiment, in which job recruiters for the business process outsourcing (BPO) industry were assigned to 80 randomly selected rural villages in India. Another 80 randomly selected villages served as control. Labor market opportunities for women in the treatment villages were enhanced through organized recruiting sessions and cost-free assistance in the application process over a period of three years. The BPO industry offers relatively well-paying jobs for women, but awareness of these opportunities is allegedly still limited. While treatment and control villages were similar at baseline in terms of labor market participation and school enrollment, in the endline survey significantly more women in the treatment villages worked away from home for pay (23.4% vs. 21%), were enrolled in vocational training (2.8% vs. 0.5%), or claimed they hope to work before getting married (43% vs. 30%). Even more interestingly in the context of this desk review, *women (aged 15–21 at baseline) in treatment villages were 5.1 percentage points (or 17.2%) less likely to have married during the three-year intervention*. Hence, the relatively moderate effect on employment was accompanied by considerable changes in human capital investment, work expectations and even marriage decisions.

**Special case: the ready made garment industry in Bangladesh**

The fast expanding garment industry plays a crucial role in shaping female labor market opportunities in Bangladesh. The sector has experienced an average yearly growth rate of 17% since the mid-1980s and now employs close to 4 million workers, more than 80% of which are female (Heath & Mobarak, 2015; Khatun, 2008). These dramatic changes in the labor market opportunities for women in Bangladesh may have affected the timing of marriage along (at least) two lines. First, the opportunity costs of marriage may have risen given that getting married in the Bangladeshi context often implies that brides take on full-time household roles and hence cannot work for pay. Second, many jobs in the garment industry require basic literacy and numeracy and availability of such jobs therefore positively affects the returns to schooling, which in turn may have induced girls to delay their marriage in favor of attending more years of schooling (Pratima Paul-Majumder & Begum, 2006).

Heath and Mobarak (2015) study the the effect of growth in the Bangladeshi garment industry on marriage, childbearing, school enrollment, and employment decisions. The authors collected data on 1395 randomly sampled households in the larger Dhaka area, including the educational and marriage histories of all household members. Together with information about the geographical location of the villages, this data then allowed the authors to construct individual-level time-varying measures of exposure to the garment industry by counting the number of years a girl has lived in a village within commuting distance of a garment factory. The results suggest that exposure to the garment industry has large and statistically significant effects on marriage postponement. Girls with six years of garment-industry exposure (the average exposure in the sample) had a 26% lower hazard of getting married in the average sample year relative to their peers living in villages without nearby garment factories. Interestingly, the reduction in the hazard of marriage is strongest for girls at young ages. E.g. proximity to the garment industry affects the marriage rate of twelve year old girls twice as much as those of eighteen year old girls. Given that young girls typically do not yet work in factories, this can be seen as suggestive evidence that enhanced labor market prospects may trigger behavioral responses even in young girls who are themselves not yet on the labor market. In fact, the authors find that girls in garment-proximate villages gain a extra 1.5 years of schooling relative to their brothers.

**Empirical analysis using DHS data**

Export Processing Zones (EPZs) play an important role in the Bangladeshi

economy. EPZs are territorial enclaves withing the borders of Bangladesh, which are characterized by special labor and trade laws designed to attract foreign businesses. The first Bangladeshi EPZ became operational in 1983 and seven more zones were subsequently established in different parts of the country. All EPZs in Bangladesh are over 100 hectartes in size and as of March 2008, more than two hundred thousand persons worked within EPZs. The garment sector made up for 86% of employment and women constitute more than 60% of all workers employed in EPZs (Mayumi Murayama, 2009).

Given their size and the number of women they employ, the establishment of an EPZ can be expected to dramatically alter female labor market opportunities in the region. In the following, we will make use of the fact that all EPZs were not established at the same time, which allows us to exploit both spatial and temporal variation to identify potential effects of proximity to an EPZ on the age at Marriage. For this purpose, we use data from the *Demographic and Health Surveys*, which includes geospatial information at the cluster level [8]. Figure 3.1.10 shows the location of all clusters in the most recent wave of the DHS survey together with the location of all Bangladeshi export processing zones.

Using the open-source GIS[9] software "QGIS", we calculate the distances between all clusters and export processing zones, which then allows us to create three different dummy variables. :

1. *Current residence in proximity to EPZ:* This dummy takes on a value of 1 if a women in our sample lives in a village, which today lies within a 50 kilometers radius of an EPZ.

2. *Current residence in proximity to EPZ * EPZ was established before the age of twelve:* Equals 1 if an EPZ was established within a 50 kilometers radius of the village before the interviewed woman reached the age of 12.

3. *Current residence in proximity to EPZ * EPZ was established after the age of twelve:* Equals 1 if the village is now located within a 50 kilometers radius of an EPZ, but no EPZ was in proximity of the village when the interviewed women was below the age of 12.

We next use these dummy variables in a logistic regression where the dependent variable indicates whether or not a women was married before her 16th birthday. To control for age cohort effects (e.g. a global increase in the age at marriage in the aftermath of a national information campaign), we include a full set

[8] Clusters in the most recent Bangladesh survey comprise on average 27 households.
[9] Geographic Information System

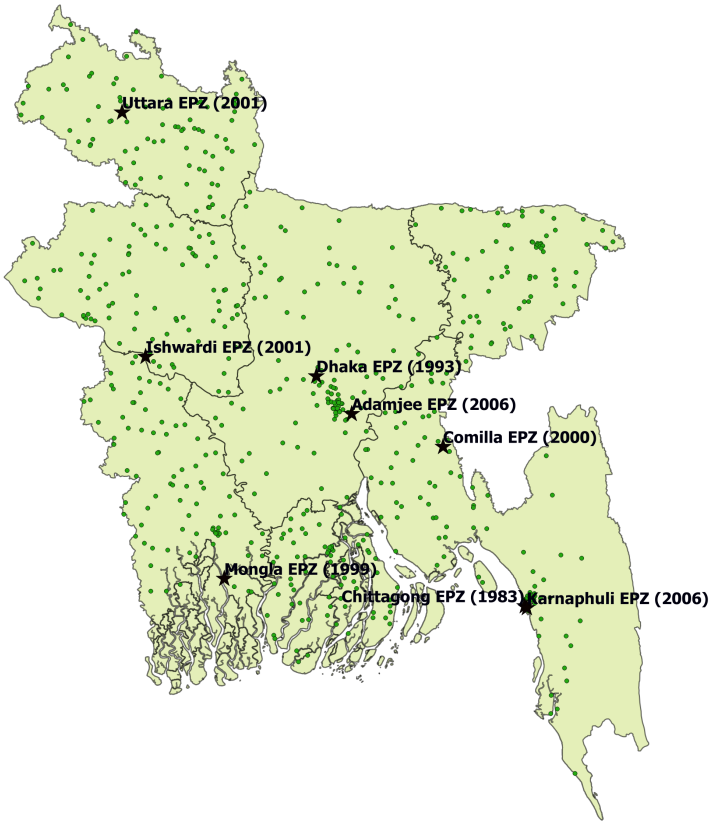



Figure 3.1.10: Export processing zones & DHS cluster locations

of age fixed effects. Table 3.3 reports the results. In a first naive specification, we regress early marriage on present-day proximity to an EPZ and find a moderately negative effect, which is significant at the 10% level. However, there are problems with this specification. First, EPZs may have been intentionally established in regions where the population qualifies for the newly-created jobs. If for example high literacy motivated the establishment of an EPZ in a given region and age at marriage is associated with literacy, then our regression might overestimate the effect of proximity to EPZs on female age at marriage. Second, many of the women who now live in EPZ-proximate villages got married before the zone was constructed and their age at marriage could therefore not have been affected by the EPZ-induced changes in labor market opportunities.

We can address the concerns by running a second specification, in which we replace current proximity to an EPZ with the two alternative dummies. In line with our intuition, we find that while the coefficient for rural residence remains unaffected, current residence in proximity to an EPZ matters only if the zone had

been established before a girl faced marriage decisions.

| Dep. Variable:<br>Married before the age of 16 | I | II |
|---|---|---|
| rural residence | .447<br>[.085]*** | .445<br>[.085]*** |
| residence in proximity to EPZ | -.137<br>[.077]* | |
| residence in proximity to EPZ * est. after age of 12 | | -.089<br>[.084] |
| residence in proximity to EPZ * est. before age of 12 | | -.262<br>[.094]*** |
| Full set of age fixed effects | yes | yes |
| Const. included | yes | yes |
| Observations | 16,352 | 16,352 |

SE in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table 3.3: Logistic regression.

**Caveat:** This is a preliminary analysis and should mostly be regarded as motivating evidence for the claim, that the establishments EPZs in Bangladesh indeed affected female age at marriage. There may well be selective migration into areas with EPZs and we do currently not account for this. Also, our results break down if we use a smaller radius (e.g. 30 kilometers) to define "proximity to an EPZ". This might be due to the fact that GPS latitude/longitude positions in the DHS survey are randomly displaced up to 10 kilometers to ensure respondent confidentially. The quality of a more narrow measure of proximity may suffer more strongly from this random displacement. On the other hand, the lacking robustness of our results may also indicate that our regression is misspecified and we must therefore take the results with a grain of salt.

**Education and the labor market**

The effectiveness of education-based interventions may also depend on the girls' job prospects for (at least) two reasons. First, the willingness to achieve higher education levels may be related to the returns to schooling, which in turn crucially depend on whether or not women can apply their acquired skills in the

labor market. Hence, if there is a large demand for education due to high returns to schooling, lowering the costs of education may have more substantial effects on dropout rates and thereby prevent early marriage by fostering school attendance. However, there is a second argument. If demand for skilled female labor is high, then girls with more education will command higher wages and the opportunity costs of marriage and early childbearing will be larger. Additional years of schooling may then not only prevent marriage due to the well-documented incompatibility of school attendance and married life, but rather higher education levels may limit the hazard of marriage even when girls no longer attend school.

### 3.1.3 Beliefs

Beliefs about the social desirability of some behavior can vary across individuals an may influence decision making. More specifically, whether or not to expect social sanctions (e.g. in the form of gossip) from marrying at an age that is considerably below or above the prevailing norm will certainly matter for the individual timing of marriage. However, beliefs about the social desirability of child marriage can change – for example as a results of an intervention.

#### 3.1.3.1 Networks

In larger societies, all people do not meet each other at the same rate and networks define the set of people with whom someone interacts more frequently. Social networks play a central role in the transmission of information and determine the reference group of people with respect to which the prevalence of a given behavior or the social desirability of an action is being assessed. Moreover, in many developing countries, networks are the basis for the provision of mutual insurance. Using individuals, families, and communities in the Chitwan Valley of Nepal, Yabiku (2006) studies the effect of neighbors and neighborhoods on marriage behavior. Controlling for local characteristics of the geographical neighborhood, this study finds that marriage rates decrease when neighbors hold views that are favorable of late marriage.

##### 3.1.3.1.1 Education and economic conditions

The aim of this subsection is to remind the reader of the fact that some of the potential causes and drivers of child marriage discussed in this desk review may affect individuals differently depending on their social networks. For example, a cash transfer program in an urban environment may have different results for

the timing of marriage relative to the same program conducted in a rural context. While additional income for parents living in large cities, where the relationship with neighbors is more transient, may induce them to postpone the marriage of their daughter, inhabitants of rural areas may be more hesitant to do so, because they anticipate social sanctions if one is to deviate from the prevailing norm of early marriage.

## 3.2 Initiation rituals

This section discusses potential causes and drivers of initiation rituals. Please note that due to the limited availability of literature, we are unable to provide academic or statistical support for most of the arguments in this section.

The structure of this chapter reflects the causal pathways depicted in figure 1.3.1. In section 3.2.1, we discuss how traditions (section 3.2.1.1.2) and education (section 3.2.1.1.3) may affect the probability of initiation rituals through shaping intrinsic motivations. Section 3.2.2 is dedicated to social sanctions and economic incentives, and we review evidence for the role of traditions (section 3.2.2.1.1),bride prices and dowries (section 3.2.2.2.2), and economic conditions (section 3.2.2.2.1) in shaping decision around initiation rituals. Finally, section 3.2.3 briefly talks about how networks may shape beliefs about the prevalence and social desirability of initiation rituals.

### 3.2.1 Intrinsic motivations

This section discusses intrinsic motivations for and against initiation rituals. Hence, it deals with behavior that is induced by the self-desire of boys and girls to not attend (the harmful part of) initiation rituals, or the decision of parents not to send their children to such initiation rituals, abstracting from the economic incentives and social sanctions involved in those decisions.

#### 3.2.1.1 Selection

##### 3.2.1.1.1 Religion

Initiation rituals in embodied in some religions. The most famous one should be the *Bar and Bat Mitzvah* in the Judaism and Jewish culture. Every Jewish boy and girl at the age of 13 must attend the ritual to become a full-fledged member of the Jewish community with multiple social responsibilities.

Krige (1968) has documented a Zulu puberty rites in honor of *Inkosazana* or *Nomkhubulwana*, a maiden deity for agriculture in Zulu religions. The puberty rites serves as part of the religious ceremony. The author argued that fertility is "an important value and the object of many rituals" and is crucial to "fully understand the nature of African religion". If this is the case, eliminating the harmful practices in those rituals require cooperation from the religious leader, and may even involve a modification or modernisation of the religion.

According to the survey by in knowledge (2015), up to 11% of the initiation rituals are done by churches in some ethnic groups in Malawi. Moreover, initiation rituals by churches receives the least negative opinions from the participants. The Ministry of Gender (2013) also mentioned that nowadays some of the catholic churches are also doing initiation rituals to compete with the traditional rituals. Normally, the initiation rituals by churches contains no physical harmful practices. That being said, it could be a good intervention diverting traditional initiation rituals to church organized rituals.

Klepp et al. (2008) emphasizes that adolescents usually get information regarding sexual/reproductive health issues from close friends and elder people. However, when religious leaders are presented, they sometimes also consult them for advice. This means collaborating with leaders of faith-based organisations (FBOs) could also help eliminate the harmful practices during initiation rituals.

#### 3.2.1.1.2 Traditions

It is quite clear that most initiation rituals are part of the local tradition. However, the mechanism initiation rituals are influenced by the tradition is unclear.

It can be argued that the contents of most initiation rituals in Africa being teaching girls to be submissive to their future husbands proves that the puberty rites are the results of the traditional gender stereotype. However, even if this is right in paternal societies, the fact of such rituals existing in maternal societies strongly object the aforementioned hypothesis.

Another traditional value of "purity" of girls is also of high interest. As argued before in Section 3.1.1.1.2, child marriage could be the result of valuing girls' "purity". However, the sexual intercourse part at the end of some initiation rituals is the direct opposite of such value. The fact that child marriage and initiation rituals involving sexual intercourse coexist in some ethnic groups is of interesting contradictory. Marriage might be a way to protect the honor of a girl and her family after extramarital pregnancies.

Therefore, further research should be done regarding the link between tradition and initiation rituals.

#### 3.2.1.1.3 Education

Potentially, if parents have longer education, they are less likely to send their children to initiation rituals involving harmful practices. However, there exists no research, to the best of our knowledge, having investigated into the correlation between education and probability of undergoing initiation rituals.

### 3.2.2 Extrinsic motivations

Behavior is not only affected by intrinsic motivations. Social sanctions and economic incentives may also affect decisions around initiation rituals.

#### 3.2.2.1 Social sanctions

#### 3.2.2.1.1 Traditions

Silungwe (2014) documents another initiation, *thimbwidza*, as a social sanction against girls who have not undergo the normal initiation rituals. Specifically, this process aims at girls who get pregnant before going through *chindakula*, an initiation rituals for common girls. If a girl becomes pregnant before undergoing *chindakula*, a dog's intestines will be placed on the girl, to remind the girl of the shame she has brought to herself and her family. In some cases, the initiators of *thimbwidza* may utilize beating so as to discipline the pregnant girl.

#### 3.2.2.2 Economic incentives

#### 3.2.2.2.1 Economic conditions

Klepp et al. (2008) expressed the idea that the establishment of cash economy by the colonists in Africa had actually facilitated girls and boys to escape from the initiations. The logic is that the colonial regimes attract adult labors to work in cash cropping, mining and other fields other than domestic cropping. Such separated husbands from wives, parents from children. The younger generations gained more individual freedom from their parents and from adult authority. It became harder for parents to inculcating norms and rules into the next generations. The initiation rituals, like many other pre-colonial rituals, relied much on ideologies of inequality between the old and the young. The weakened authority

of the old, as the result of the cash economy, also weakened the coerciveness of the rituals, and the young took the advantage to escape the rituals.

#### 3.2.2.2.2 Dowry & Bride price

It is not clear if dowry and bride price has any correlation with initiation rituals. It could be the case that a girl marry without undergoing initiation rituals will get a lower bride price; or a girl marrying a boy that is not initiated will get less or no dowry from her family.

Gray (1960), however, documented some economic incentives which is very similar to the bride price. In the marriage culture among the Sonjo of Tanganyika (nowadays a part of Tanzania), initiation can be a determining aspect of the punishment involved in the marriage. Some of the punishments regarding pre-martial pregnancies are:

- For sexual intercourse between an uncircumcised boy and an uncircumcised girl. Circumcision and ritual purification must be performed before the birth of the child. Previous betrothals are broken. The pair normally marry, as their permanent impurity prevents either from marrying another Sonjo. The boy expiates by clearing a patch of forest and planting grain, then leaving the crop unharvested.
- For sexual intercourse between an uncircumcised girl and an initiated male. Dealt with as above, but in addition the man is fined twelve goats. If the putative father cannot be found, the girl is sold to the *Masai*.
- For sexual intercourse between any male and an initiated betrothed girl. A purification ceremony must be performed before the birth of the child. The guilty man is fined six goats and required to pay compensation of six goats to the fiancé. The betrothal is not necessarily broken.

### 3.2.3 Beliefs

Beliefs about the social desirability of some behavior can vary across individuals an may influence decision making. More specifically, whether or not to expect social sanctions from undergoing initiation rituals will certainly matter for the individual's decision. However, beliefs about the social desirability of initiation rituals can change – for example as a results of an intervention.

#### 3.2.3.1 Networks

##### 3.2.3.1.1 Education and economic conditions

We would again to remind the reader that the potential causes and drivers of initiation rituals discussed in this desk review may affect individuals differently depending on their social networks. As much as we would like the emphasis on the importance of beliefs, we do not have any available evidence to support the argument.

## 3.3 FGM/C

This section discusses potential causes and drivers of FGM/C. The structure of this chapter reflects the causal pathways depicted in figure 1.3.1. In section 3.3.1, we discuss how traditions (section 3.3.1.1.2) and education (section 3.3.1.1.3) may affect the probability of FGM/C through shaping intrinsic motivations. Section 3.3.2 is dedicated to social sanctions and economic incentives, and we review evidence for the role of traditions (section 3.3.2.1.1),bride prices and dowries (section 3.3.2.2.2), and economic conditions (section 3.3.2.2.1) in shaping decision around FGM/C. Finally, section 3.3.3 briefly talks about how networks may shape beliefs about the prevalence and social desirability of FGM/C.

### 3.3.1 Intrinsic motivations

This section discusses intrinsic motivations for and against FGM/C. Hence, it deals with behavior that is induced by the self-desire of girls to not undergo the operation, or, more realistically, the decision of parents not to send their daughters to go through the operation, abstracting from the economic incentives and social sanctions involved in those decisions.

#### 3.3.1.1 Selection

##### 3.3.1.1.1 Religion

Religion is believed to be an important cause of FGM/C, and it plays an essential role in the decision to practice FGM/C. However, no religious scriptures indeed specifically requires FGM/C, and it is the community that sometimes consider FGM/C a requirement for “spiritual purity”. Moreover, the prevalence of FGM/C is not perfectly inline with religions within the same region: there are both Christan and Muslim communities practicing FGM/C in the same region, while nearby

communities of the same religion may not practice it; moreover, most Christians and Muslims worldwide do not follow the practice (Mackie & Lejeune, 2009). Even so, to tackle FGM/C disguised under the cover of religion, an approach involving religion is required.

Abdi and Askew (2009) provide an example intervention. The Population Council's FRONTIERS programme developed a religious oriented approach to eliminate FGM/C practice among the Somali ethnic communities in North Eastern Kenya, as most of community members believed it to be an Islamic requirement. The religious scholars within the communities were asked to clarify the Islamic position regarding FGM/C to the community members. Their claimed that the discussion between the religious scholars and community members had considerable mind-change effect, and less people believed in the continuation of FGM/C practices. However, attention needed to be drawn as the author did not reveal the actual measurement of the attitudinal change. First, the attitudinal change is not necessarily the behavioral change, which is the actual focus of eliminating FGM/C practices. Second, a simple test (for the literate) and even "show of hands" (for the illiterate) are very unlikely to reveal the true attitude, particularly for such intervention where religious scholars made clear position opposing the practices. Hence, it is likely that the research overestimate the attitudinal change.

#### 3.3.1.1.2 Traditions

Please refer to Section 3.1.1.1.2 for the discussion on this aspect.

#### 3.3.1.1.3 Education

Bellemare, Novak, and Steinmetz (2015) investigated the persistence of FGM/C in ten West African countries. They exploited the variations in the women's perspective towards the continuation of FGM/C. They concluded that most of the variations is attributable to household level heterogeneity. Among those household level variables being examined, education plays a very important role. For example, in Gambia, women with primary, secondary, and higher education are on average 2.6, 8.5 and 16.4 percentage points less likely to believe that FGM/C should continue, respectively. The number varies between countries. However, education is the only factor that is statistically significantly correlated with the belief in continuing FGM/C across all ten countries. Though the correlation could not be interpret as causal for sure, it still provides some insights of how education

may serve as an intrinsic motivation to keep women away from FGM/C.

Intervention through the education channel is not necessary through schooling. Vogt, Mohmmed Zaid, El Fadil Ahmed, Fehr, and Efferson (2016) successfully change the cultural attitudes towards FGM/C in Sudan through entertainment. They developed four entertaining movies about an extended family in Sudan with the main plot containing a mix of love, intrigue, deception and forgiveness. The four movies are as follows:

- Values movie: main plot plus discordant views on the role of health, Islam, femininity and morale in FGM/C.
- Marriageability movie: main plot plus discordant views on how cutting affects marriage prospects.
- Combined movie: main plot plus values and marriage prospect views.
- Control movie: main plot takes more time.

In the first experiment, they randomized participants in each of the communities to the four movies and measure the non-intrusive attitudes by Implicit Association Test (IAT) immediately after they watch the movie [10].

In the second experiment, they randomized community groups to the four movies and measure the IAT scores before the movie (baseline) and one week after the movie (follow-up) to examine the long-term effect.

Their tests measured attitudes about cut versus uncut girls, and assigned test score $D$ with $-2 \leq D \leq 2$.

The three treatments in the first experiment improved attitudes towards uncut girls by about 55–64% of a standard deviation in $D$ scores. The effects of the three experimental treatments were indistinguishable from each other. Such suggests that both individual values and marriageability concerns could have an impact on changing attitudes about FGM/C.

In the second experiment, they found significant improvement in attitudes towards uncut girls, but only for the combined movie. This confirmed the combined essentialness of individual values and marriageability in a longer term.

However, the interventions are not always easy and successful. Two other studies in Senegal (Diop et al., 2004) and Burkina Faso (Ouoba, Congo, Diop, Melching, & Banza, 2004) also utilizes education as the intervention tool in Senegal and Burkina Faso respectively. They educated in hygiene, problem solving,

[10] This is to avoid spillover effect since people having seen different movies may discuss them with each other afterwards

women's health, women's health, and human rights. The randomized on village level (20 villages in both treatment and control in the Senegal study, and 23 in the Burkina Faso study). Both encountered the same difficulties – participating women are not interested in the program enrolled, and many community members, majorly male, expressed discontent regarding the intervention. The participating rates were quite low.

The Senegal study found that the proportion of non-cut girls younger than 10 years old was higher than before the intervention. The Burkina Faso study also found that after the intervention, the proportion of girls 0 to 10 years old who had not been cut was higher than before, and no girls under the age of 5 were reported to have been cut. Though causal language was used in the study, we still hold our doubts regarding the real causality of these change.

### 3.3.2 Extrinsic motivations

Behavior is not only affected by intrinsic motivations. Social sanctions and economic incentives may also affect decisions around FGM/C.

#### 3.3.2.1 Social sanctions

Mackie and Lejeune (2009) and Mackie (2017) compared FGM/C with the Chinese footbinding which was ended within a generation. He proposed a theoretical framework of a coordination game to understand footbinding and FGM/C. Here is a modified version of the coordination game regarding FGM/C.

There are two strategies for parents. Strategy 1 (cutting): parents choose to cut their daughters, and require their sons to only marry women that are cut. Strategy 2 (non-cutting): parents choose not to cut their daughters, and require their sons to marry uncut women.

Assume a successful marriage brings a benefit of $b$, and unrealized marriage has a normalized benefit of $0$. The cost of cutting is $c < b$. Then the coordination game can be represented as in Table 3.4.

| | | All other families' choice | |
|---|---|---|---|
| | | cutting | non-cutting |
| Individual families' choice | cutting | $b - c$ | $-c$ |
| | non-cutting | $0$ | $b$ |

Table 3.4: Coordination Game of FGM/C

It is clear that the Nash equilibria are coordination: {cutting, cutting} and {non-cutting, non-cutting}. The visualized result is presented in Figure 3.3.1.

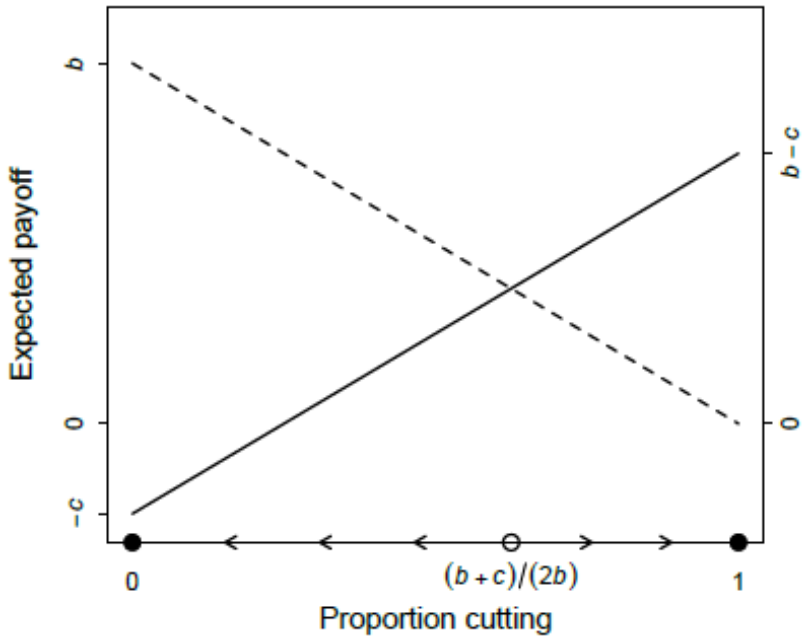



Figure 3.3.1: Graphical Representation of Coordination Game of FGM/C

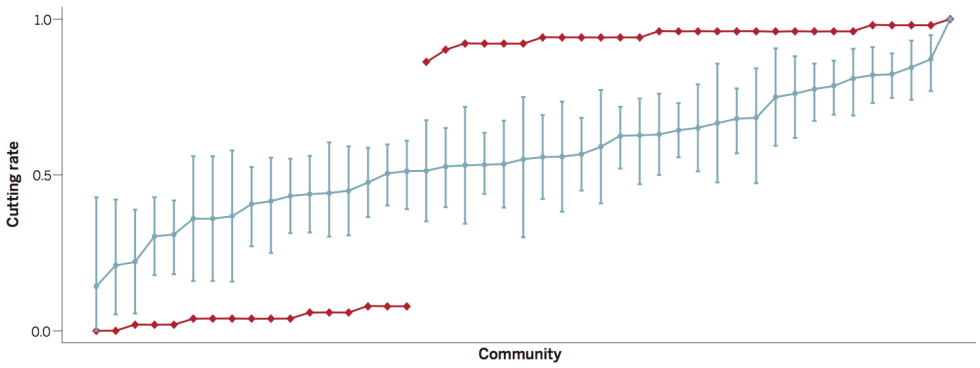
If this is the case, eliminating FGM/C in Africa could be as easy as easy as eliminating footbinding in China.

However, Efferson, Vogt, Elhadi, Ahmed, and Fehr (2015) disproved the theory. If FGM/C is really a social coordination game, communities should have extreme cutting rates – converging to either 100% or 0%. The authors attained estimation in Sudan (see Figure 3.3.2), which is very different from the theoretical prediction. The predicted values from the model are presented as red dots, and the observational data are presented as blue dots with 95% confidence intervals.

The contradiction between blue and red dots proves that FGM/C is not a social coordination game. If this is the case, intervention involving social sanctions (e.g. illegitimization of FGM/C) may have little effect.

#### 3.3.2.1.1 Traditions

As argued before, the practices of FGM/C roots in the cultural, not religious, tradition of some African countries. However, intervention ignoring such tradition could do more harm than good. The astonishing case was described by Ahlberg, Krantz, Lindmark, and Warsame (2004). The Swedish government fail to get aware of the traditional implications of the practices among the Somali




**Cutting rates in Gezira communities.** Red diamonds show ordered cutting rates as predicted by the coordination game model (*12*). Blue dots show actual cutting rates across the 45 communities with 95% boot-strapped confidence intervals.

Figure 3.3.2: FGM/C Is not a Social Coordination Game

refugees having settled in Sweden, and the ignorance in turn encouraged the persistence of FGM/C practices.

#### 3.3.2.2 Economic incentives

It could consist an intervention to reward people abandoning cutting and to fine people practicing it economically. However, it is not observed throughout the world, as far as to our knowledge. It is either not punished, or criminalized.

##### 3.3.2.2.1 Economic conditions

The economic improvement in well-being of the households and communities could also potentially reduce the prevalence of FGM/C. A community development program might be a suitable intervention. However, searching through literature only land in community development programs focusing on education and other cultural and attitudinal aspects, rather than economic development.

##### 3.3.2.2.2 Dowry & Bride price

Just like child marriage (see Section 3.1.2.2.1), the practices of FGM/C could potentially correlate with the dowry or bride price. Chesnokova and Vaithianathan (2010) argued that the practice of FGM/C could actually be seen as a pre-marital investment. They found the association between the practices of FGM/C and better marital outcomes, and concluded that circumcised women are on average living in wealthier households, the first wife in a polygamous household, and marrying at an earlier age. In other words, circumcised girls have a higher bride price

in the marital market.

Along the same logical line, they predicted from a theoretical model that societies might be trapped in an equilibrium with high FGM/C prevalence. In such cases, a Pareto improvement can only be reached by regulations and laws, and even weak regulations can be effective in such cases.

### 3.3.3 Beliefs

Beliefs about the social desirability of some behavior can vary across individuals an may influence decision making. More specifically, whether or not to expect social sanctions from performing FGM/C will certainly matter for the individual's decision. However, beliefs about the social desirability of FGM/C can change – for example as a results of an intervention.

#### 3.3.3.1 Networks

##### 3.3.3.1.1 Education and economic conditions

Once again we need to remind the reader that the potential causes and drivers of FGM/C practices discussed in this desk review may affect individuals differently depending on their social networks. However, no literature has drawn any attention specifically on this aspect yet.

# Chapter 4

# Key knowledge gaps

While many causal relationships have been identified, there are still some very interesting questions that have been left open so far.

**Child Marriage**

- A number of interventions suggest that school-based interventions can cause a delay in female age at marriage; however, the causal chain through which education affects the timing of marriage is disputed. Does education of girls provide enhanced autonomy, skills and aspirations, leading them to postpone marriage, or rather school attendance shields girls from being married due to other causal links, such as cultural norms that consider schoolgirls to be off the marriage market?
- The literature on early marriage indicates that parental influence in the timing of marriage is important. What is the role that parents' fear of premarital sex plays in this decision? Moreover, does the choice of a child bride reflect the preferences of the prospective groom or those of his parents?
- Similarly, marrying old is often claimed to put a girl's social reputation at risk, does the same hold true for grooms who chose to take older girls as their wives?
- Faith-Based Organizations occupy a special position in the complex network of causal pathways around child marriage since they stand in close connection to some of the presumed drivers of child marriage. How can messages advocated by spiritual leaders affect behavior in the context of child marriage?

- Cash transfers have also proven to be effective in delaying marriage, and girls from low-income families are more likely to be affected by child marriage; therefore, understanding the role played by economic conditions, as well as the nature of dowries, would be crucial to improve future interventions.
- The major focus of child marriage is on girls. However, what are the consequences of child marriage of boys? Do the consequences of girls marrying adult men differ from those of girls marrying boys?
- How does network influence the decision of carrying out child marriage? What is the role of children's peers?

**Initiation rituals**

- Who are the decision makers regarding participating in initiation rituals?
- What is the reason of parents sending their children to initiation rituals, or children themselves seeking to participate in initiation rituals, especially those involving sexual intercourses? Is purity the concern?
- How should intervention be designed to tackle down the harmful practices during initiation rituals?
- How effective is embodying religion into the intervention in eliminating harmful practices during initiation rituals?
- Are the correlation identified in Section 3.2 causal?
- How would beliefs affect the prevalence of initiation rituals?
- What is the relationship between the sexual activity component of initiation rituals and adolescent sexual behavior? Is the sexual activity component a substitute or compliment to child marriage?

**FGM/C**

- How effective is embodying religion into the intervention in eliminating FGM/C practices?
- Could economic incentives really affect the choice of practising FGM/C? Could improvement in economic conditions reduce the practices?
- How would beliefs and social network affect the prevalence of FGM/C?

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