NOVA SCHOOL OF BUSINESS & ECONOMICS

Development Economics: Spring 2021
Research Proposal

THE ROLE OF COMMUNITY PREFERENCES IN CHILD MARRIAGE

The effect of a randomized radio intervention program on the social norm in rural Ethiopia

Patricia Caetano
Student Number: 29049

1. Introduction

1.1. Motivation

In 2020, COVID-19 highlighted many fragilities of developing countries, especially in the topics of digitalization and social programs, extremely needed for an "interrupted" and at-distance life. Nevertheless, the pandemic also ended up emphasising, through their current absence, the important role that many sectors have been playing in continuously improving the lives of several people. For Sub-Saharan Africa, one of those sectors was education and every child lost without it. At home, besides the implications of low levels of learning, African children were more at risk of child labour, armed conflict, and insecurity, concurrent with the hazards associated with climbing extreme poverty rates. But one group of children faced unique barriers to follow education at a distance: girls. From increased home chores and responsibilities to harassment and abuse, many international organizations fear that girls will be disproportionally driven out of school, especially due to what most stops a girls' education: Child Marriage and pregnancy, limiting their opportunities and life potential (UNICEF, 2018).

Child Marriage, i.e., formal marriage or informal union between a child under the age of 18 and an adult or another child, is a great violation of children's rights and one of the main threats to children's (especially girls') education, well-being and future. The global commitment to end this wrongful practice (usually compared to slavery) is shown through the work of multiple organizations and the United Nations Sustainable Development Goal 5 of Gender Equality[1], to eliminate the practice by 2030. While the reported cases have been decreasing during the last decade – registering a 15% decline – in many countries it is still socially accepted and not considered in the law. As mentioned, girls are disproportionally affected by this event, as child grooms represent only one sixth of the 650 million child brides worldwide, which is fuelled by beliefs deep-rooted in gender inequality. In the present pandemic times, without the safety and vigilance of school plus the rising household economic needs, the World Bank reports "a spike in Child Marriages globally", disrupting the past efforts to end it. Corroborating this, the United Nations estimates that due to COVID-19 13 million more girls will be forced into a union between 2020 and 2030.

Being home to 15 million child brides, Ethiopia is an example of a country that was making great progress, planning to end Child Marriage by 2025. Currently, such goal is at jeopardy, and early marriages resurfaced in the country, signalling a return to the old traditions. Current statistics place Ethiopia in 14th in terms of highest prevalence of Child Marriage globally (14% before 15 years old and 40% before 18 years old), and in 4th regarding highest absolute number of child brides. The focus of this practice is especially concentrated in the Amhara region where 45% of girls get married before 18 (Figure 2). Despite these results, Ethiopia's progress in the fight against Child Marriage is shown in her legal framework: the minimum legal age of marriage is 18 years old (however one can do it at 16 with parents' approval) and both child and forced marriage are criminalized. The problem lies in the enforcement of the

[1] Target 5.3: "Eliminate all harmful practices, such as child, early and forced marriage and female genital mutilation." (UN SDGs)

law, especially in religious, informal and customary marriages. Girls Not Brides[2], an international non-governmental organization, identifies various drivers of Child Marriage in Ethiopia (Table 1) that can be aggregated in 3 main dimensions: community preferences, gender inequality and poverty & insecurity. This suggests that any effort to end Child Marriage efficiently must be multifaceted.

Through what I disclosed in this introduction, in the rest of the paper I'll describe an intervention that uses the channel of community surveillance to prevent Child Marriage, through the impact on the community preferences dimension. Despite the correct laws being in place, the traditional attitudes and social norms will keep enabling Child Marriage unless there are social sanctions in place that make it undesirable. The main assumption is that communities at large are unaware of the consequences that Child Marriage brings upon girls. The implicit hypothesis is that by bringing information to the field, communities' preferences for Child Marriage will invert. In the next sub-section, I'll discuss how the change in community preferences impacts the economic decision of Child Marriage. If this mechanism is verified, an intervention with long-lasting impacts to Child Marriage can be arranged, instead of the need of permanent interventions of conditional cash transfers that don't influence preferences nor traditions. Nevertheless, one has to spotlight the economic duress that many households endure, and how Child Marriage can present itself as an harmless solution.

1.2. Theory: Microeconomics of Child Marriage

95% of girls in Ethiopia are married through forced marriages arranged by their parents (UNICEF). Child Marriage is many times proposed as a positive economic transaction at the household level despite the huge macroeconomic costs linked with the practice (Wodon et al. 2017). In this section we aim to model the Child Marriage participation decision through the mechanisms observed so far, and to assess how the intervention proposed can tip such choice.

The utility function of an household can be represented as depending positively on two dimensions: wealth (W) and subjective well-being[3] (S): $U_i(W; S)$. The household will decide to participate in Child Marriage if its utility level increases with it, i.e., Child Marriage is an economically rational decision. The decision model involves 4 variables:

$GirlCost$: present value of the forgone cost of raising the child ("mouth to feed");
$BridePrice$: the economic value of the "fee" paid by the groom or groom's family to the bride's family upon the union (common in Ethiopia in the form of cattle or money);
$GirlValue$: present value of the forgone economic value of the child (extremely dependent on the household's perceptions on gender and economic prospects in the region);
$SocialStatus$: the subjective well-being (SWB) value of one's status among their community.

In psychology, social status is defined as the level of respect or honour associated with a person's position in society. In our model, it's the variable that reflects the reaction of the community to the household's Child Marriage decision, based on the current social norm.

[2] Global partnership of more than 1300 civil society organisations from over 100 countries;
[3] Subjective Well-Being (SWB): A person's cognitive and affective evaluations of their life (Diener et al., 2002)

Thus, the social status of the household will increase if the action taken adheres to the social norm, and decrease otherwise, impacting the SWB of the household.

While social sanctions can take the form of economic costs, particularly in intra-dependent rural communities, we follow the literature linking positively social status to SWB (Sapolsky, 2004; Anderson et al., 2012) and as a driver of human behaviour (Baumeister & Leary, 1995).

Thus, the baseline utility of an household can be defined as:

$$U_i(W; S) = U_i(W_0, S_0)$$

If the household decides to engage in Child Marriage (CM), its utility level is:

$$U_i(W; S \mid CM) = U_i(W_0 + GirlCost + BridePrice - GirlValue,\ S_0 + SocialStatus_0|CM)$$

Thus, even if $GirlValue$ is high enough to offset the gains in wealth, in a community that approves of Child Marriage (positive $SocialStatus_0$) household's utility will increase with it. Past interventions can be described within this economic decision framework. Conditional cash transfers can work as a substitute of $BridePrice$ or a subsidy to $GirlCost$. Empowerment and training programs, as well as information on the returns of education can increase the perceived $GirlValue$. However, in this intervention, we contribute to the Child Marriage experiments literature by exploiting the $SocialStatus$ variable, to turn around the household decision on Child Marriage. Thus, by changing the social norm regarding Child Marriage, making it a "protective norm", households now have to face the well-being cost of social exclusion, shame and other sanctions if they participate in the practice, represented by the variable $SocialStatus_1$. The assumption, to prevent Child Marriage, is that such negative $SocialStatus_1$ offsets the positive incentives to wealth, and thus the household is better off to adhere to the new social norm – not participating in Child Marriage ($\overline{CM}$). Hence, verifying:

$$U_i(W_0, S_0 + SocialStatus_1|\overline{CM}) > U_i(W_0 + GirlCost + BridePrice - GirlValue,\ S_0 + SocialStatus_1|CM),$$

in which $SocialStatus_1|\overline{CM}$ is positive and $SocialStatus_1|CM$ is negative. Now, households face a trade-off between the increase in wealth and the decrease in subjective well-being.

However, it can be argued that the information intervention can also impact the decision making process through another channel: the "caring" mechanism, that also impacts the subjective well-being of the household. Albeit more naively, one can defend that parents are oblivious to the consequences of Child Marriage, thinking that they're acting on the girl's best interests (escaping poverty, preventing assault and shame). Informing the parents about the horrors of Child Marriage could change the decision internally – in spite of the social norm.

1.3. Research Questions

All in all, with the proposed experiment we aim to tackle the following questions:

- Can information on the dangers of child marriage change individual preferences for it?
- Can information on the dangers of child marriage change social preferences for it?
- Is the threat of social sanctions efficient at preventing child marriage?

2. Literature Review

The list of negative consequences of Child Marriage for young girls is extensive and well documented. Regarding physical health, Child Marriage is directly associated with many maladies and one of them is HIV. Child Brides' risk factors for HIV are inherent to their age and social situation: immature reproductive tracts, unprotected and intergenerational sex, polygamy traditions, low empowerment, education, health seeking behaviour and knowledge (African Union Commission, 2016). Moreover, it is also estimated that in Ethiopia over 80% of early childbirths[4] are attributed to early marriages. Childbirth and pregnancy takes a high toll on the underdeveloped bodies of young girls and the earlier the first pregnancy occurs, the higher the fertility rate is likely to be[5] (Wodon et al., 2017). Maternal mortality and morbidity rates, with severe complications as obstructed labour or obstetric fistulas, are much higher for young women (UNFPA, 2003). Additionally, as pregnancy weakens the immune system, pregnant girls are more likely of being infected with Malaria and exposed to its related complications (Nour, 2006). But the risk is not only for the young mother, having "children delivering children" harms the next generation. The infant mortality rate among this population is much higher and the children are more likely to be born preterm and have a low birthweight, leading to live-long complications. Regarding mental health, Child Brides are less empowered, less informed and have less agency. They are more isolated, more depressed and more likely to suffer from domestic violence and sexual assault (Wodon et al., 2017). However, this psychological trauma brings no empathy in the communities, as it is seen as "an unavoidable part of life" (UNICEF, 2001).

McGavock (2020) analyses the effect of Ethiopia's Child Marriage law when it was rolled out in 2000, from age 15 to age 18. While the author finds significant decreases in Child Marriages (6.8 percentage points), the effect is insignificant among women belonging to ethnic groups with the strongest norms towards early marriage, highlighting the importance of changing social norms in these settings. Hanmer and Elefante (2016) advance one main challenge in imposing the legal framework: the lack of birth registration and certification.

Interventions to reduce Child Marriage have targeted a myriad of dimensions, however with mixed results, challenging their external validity. Financial incentives to delay marriage have been effective, both conditional on education and on remaining unmarried (Buchmann et al, 2018). Corno and Voena (2016) put forward that with incomplete credit markets, income shocks leave the household to use the bride price (and the forgone cost of raising a girl) as a consumption-smoothing device. Interventions with empowerment programs have a broader focus, they can consist of information programs (gender-rights awareness training), life-skills and career training to keep girls in school, as the Bangladeshi BALIKA program, with positive results (Amin et al., 2016). Community approaches have been more neglected, but they have

[4] Early childbirth: having a first child before the age of 18

[5] For Ethiopia, marrying at age 13 and at 17 marginally impacts total fertility by 33.8% and 23%, respectively.

consisted in targeted community activities to influence attitudes and increase local knowledge of the negative consequences with community dialogue and street theatre (Chae et al., 2017).

Regarding interventions that use social norms to change behaviour, Young and Goldstein (2021), highlight the importance of communicating and aligning two types of social norms: descriptive (how other people are behaving) and injunctive (what behaviours are approved by the society), to maximize the impact of the intervention. Arias (2018) distinguishes two channels in how media can influence social norms: the individual channel (new information persuades the individual) and the social channel (information about what others learn facilitates coordination). However, the author finds no evidence in support of the first mechanism, making only publicly transmitted media effective. Gage (2013) found that mass media and interpersonal communication exposure are positively associated with Child Marriage prevention outcomes.

"*Edutainment"* interventions to change and influence behaviours have been particularly common in Africa in themes as HIV-prevention, gender-based violence and financial savings. Green et al (2020), in a mass media experiment in rural Uganda regarding violence against women, concludes that while the intervention didn't change attitudes, it increased the willingness to report and decreased the share of women that experienced violence, highlighting the social surveillance mechanism.

3. Methodology

3.1. Survey and Sampling Framework

As mentioned, Child Marriage in Ethiopia is specially persistent in the Amhara region, with 12 administrative zones (Figure 3). Spotlighted by UNICEF and thus chosen as the area of study is the North Gondar Zone, divided in 23 *woredas* (districts) and with 558 *kebeles*[6] (Figure 4).

A randomized field experiment will be performed to more confidently identify the effects of the experiment, with households being the unit of study – more specifically the head of the household, due to his/her agency and power in the decision making process, as well as his/her relationship with the community. Nevertheless, due to the public component of the treatment, randomization will be clustered at the *kebeles* level. As a consequence, concerning spill-overs, we are confident that *kebeles* are big enough to contain the treatment, and information won't travel from one *kebele* to another. Nevertheless, randomizing at the cluster level comes with a power cost, and sample size is recommended to be bigger the more similar the individuals within a cluster are (J-PAL, 2017). Thus, given the plausible similarity of individuals belonging to the same *kebele*, a sufficient number of clusters should be guaranteed. Hence, we recommend that, taking into account the average size of each *kebele*, treatment is randomized for 50 villages, keeping 50 villages for control, and 458 not part of the study. We estimate that approximately 117 thousand households[7] will be part of the study (equally split in treatment and control), and thus eligible to the data collection process. In each

[6] A *kebele* is the smallest administrative unit in Ethiopia. It contains at least 500 households.
[7] North Gondar zone is home to 654,803 households (2019).

selected *kebele*, 20 households are to be surveyed, to ensure representability. These households are selected through a Random Walk process, in which the enumerators depart from a certain point in each *kebele*, and try to interview the households they find on their way, with a interval of 5 houses in between to guarantee coverage of more isolated communities. Thus, 2.000 households will be surveyed at baseline and the same households will be re-assessed at end line. For that, the baseline process will also entail geo-coding of each household and contact collection, to decrease possible attrition in case of moving.

3.2. Experiment Design

The community support for Child Marriage is keeping the tradition alive in Ethiopia, despite of such practice being criminalized in the law. Hence, we propose a mass media intervention to provide information to the community about the dangers of Child Marriage.

The advantage of *edutainment* is its vicarious learning approach and how it enables the focus on routine experiences and relatable stories to convey the information, so relevant for low-developed settings. The purpose of the treatment is to update beliefs on Child Marriage that, supported by theory, will then impact the common social norm. Thus, it must be accessible to all society, in the local Amharic language and with Amhara performers. Ethiopia has had successful and widely viewed *edutainment* interventions, as in the area of HIV/Family planning (Farr et al., 2005), with the USAID sponsored radio program "Journey of Life". Radio comes across as the best media option: big community events would require difficult logistics and might attract individuals from other *kebeles* creating contamination; and TV ownership is very low, especially in our rural area of study. Moreover, in low developed settings it is common that due to lower personal radio ownership, communities share radios and listen to their programs together, perfect to incentivize discussion, social reflection and update perceptions. According to a study by AfroBarometer, 47% of households owned a radio in 2013, and it was the most commonly used media to access news.

As we can see in Figure 5, the currently existing radio stations cover a big portion of the territory, not allowing to efficiently assign treatment without risking contamination. To ensure compliance, i.e., only the treated *kebeles* having access to the radio program, it's recommended that each treated *kebele* has its own radio transmitter, with a specific frequency that only covers the *kebele* it is present on. Outside program hours, the local transmitter should broadcast the local radio to ensure that nothing confounds treatment.

Following transmitters implementation, a baseline survey will be conducted both in control and treatment villages. The aim is to gather socioeconomic and demographical data of the household (along with radio ownership and community dependence measures, i.e., loans from the community), as well as number of child brides in the household (i.e., the number of women in the household that were married before age 18). Despite the randomization by design, guaranteeing baseline balance across villages on covariates is standard practice in the field experiments literature. Taking advantage of these visits to collect baseline data, treatment households will receive flyers advertising their newly implemented

local frequency. While nothing will be said of the upcoming radio program, announcing the new frequency to households its key, to make sure it will be used, and treatment can follow.

For the next month, meanwhile baseline data is collected and flyers are distributed, the transmitters in the villages will also start promoting the new radio program every week, to build up attention and increase listenership. Despite similar programs success in the past (as Journey of Life), such promotion is important, to arrive to as many households as possible.

The treatment will consist of a radio soap opera, thus only broadcasted in the treatment-allocated *kebeles*. The program will be aired during three months, one hour every day at peak time to maximize listenership. The soap opera will tell the story of 2 girls: one that married young and one still unmarried, because the community intervened. It will confront their very different lives, health statuses and societal contributions. It is of the utmost importance to make the story compelling and interesting to all ages, religions, occupations and genders.

Outcomes of interest will be collected post-intervention, through a survey to the households studied at baseline that will evaluate the following 3 dimensions:

1. Preferences: Individual preferences and perceived communities' preferences over Child Marriage;
    a. "What's the best age to get married? / What's the age your community would say?"
    b. "Do you approve CM? / Do you think your community approves CM?"
2. Importance of social norms: conditioning of individual actions; disutility of social sanctions;
    a. "Would you marry your underage child if your community was against it?"
        i. "If you knew the cost to be socially excluded and shamed publicly?"
3. Education: knowledge of Child Marriage consequences and of the legal framework;
    a. From a list, select the health consequences associated with CM for the bride and her children;
    b. What is the minimum age to marry is in Ethiopia? Is Child Marriage a crime?

Lastly, it should also be inquired if the household took part in the intervention (i.e., if they listened to the program at least for 12 full episodes, i.e., on average watched 1 episode per week): for control villages it will verify if there was any contamination; for treatment villages it will determine if the household can be considered as "treated", i.e., a measure of take-up.

Due to the limitations and biases that surveys can entail, other two outcomes of interest will be collected through administrative data. The first, regarding the age of new mothers (a good proxy for age of marriage), can be collected from the local health centres, health stations and health posts in each *kebele*. The second, primary and secondary school enrolment for females, can be collected from the local schools. Moreover, these outcomes will provide us a more encompassing view of the effect of the treatment, more precise and longer-term.

Consequently, our intervention timeline consists of: implementation of radio transmitters in treatment *kebeles*, baseline survey for all households in the study and frequency flyers to treatment, weekly advertisement of the radio program (lasting 1 month), the information

treatment (lasting three months) and 1 month after the end of the treatment, the post-intervention survey for both treatment and control *kebeles*. The 1 month break between treatment and survey should allow for unobserved reflection, community discussion and belief update as well as permitting disassociation of the data collection with the treatment, minimizing bias. Lastly, 2 years after the beginning of the project and 18 months after the end of the treatment, administrative data will be collected at the local schools and health centres.

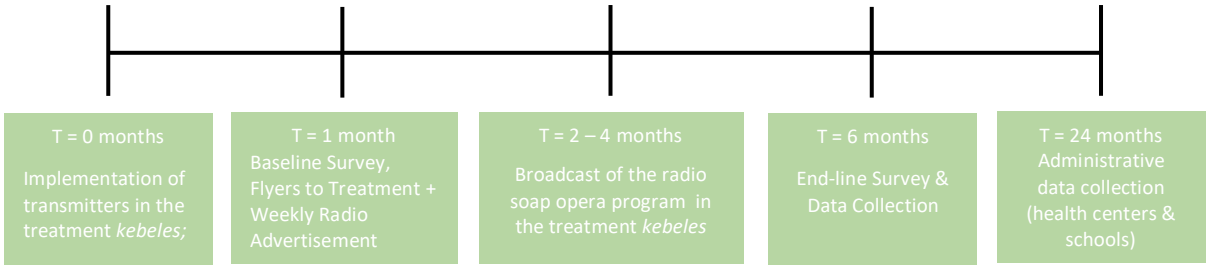


Figure 1 - Project Timeline (months)

All things considered, the main hypotheses for our outcome variables are:

- Treatment thinks that the community prefers an higher age at marriage;
- Treatment is more likely to think that the community disapproves Child Marriage;
- Treatment is less likely to marry their underage child if the community is against it (Social Status), as the possibility of such norm being a reality is more sustained;
- Treatment is more informed on the dangers of Child Marriage / legal framework;

Hence, by assuming that individual preferences don't change, we assume that the "caring mechanism" is null and only the "social status" is at play.

3.3. Estimation Strategy

After the data collection, our estimation process can be conducted through an Ordinary Least Squares (OLS) regression, given the identification strategy provided by the randomized field experiment. However, one must not forget that as our randomization is done at the *kebele* level, we have to assume that the error terms are correlated within that level, and thus cluster the standard errors for each *kebele*. Given the non-compulsory characteristic of treatment (the intervention is the offer of the treatment in the village and it can not be enforced on households), our estimation will deliver a Intent-to-Treat effect. Nevertheless, we should keep in mind that the households that don't take up the program may still be treated through information circulating in their community. The estimation equation is the following:

$$Y_{i,l} = \alpha + \beta_1 Treatment_l + \delta \boldsymbol{X}_{i,l} + \mu_{i,l} \; (i \; denoting \; households, l \; denoting \; kebeles)$$

The outcomes of interest, $Y_{i,l}$, are: individual age preference for marriage; perceived community age preference for marriage; individual preference for Child Marriage (dummy); perceived community preference for Child Marriage (dummy); Child Marriage decision with social sanctions (dummy); knowledge of Child Marriage consequences and Ethiopia's legal frame work (weighted score).

$Treatment_l$ is a dummy variable that takes value 1 if the household lives in a treated *kebele*, and 0 otherwise.

$\boldsymbol{X}_{i,l}$ is a vector of control variables at the household level, also collected in the intervention survey. Socioeconomic and demographical indicators (average income and education level, radio ownership, household size, loans from the community, number of child brides, and others), are relevant to correct for possible imbalances in treatment and control groups.

Lastly, the error term $\mu_{i,l}$ represents all household's unobserved determinants of our outcomes of interest, orthogonal to the village treatment dummy for estimator unbiasedness.

The main coefficient of interest of our estimation is β_1, i.e., the intent-to-treat effect at the *kebele* level on the households' outcomes of interest.

Secondly, for the administrative data collected through health centres and local schools, which entails outcomes at the *kebele* level, one should use the following equation:

$$Y_l = \varphi + \theta_1 Treatment_l + \delta \boldsymbol{X}_l + \varepsilon_l \ (l \ denoting \ kebeles)$$

The outcomes of interest, Y_l, are: age of new mothers, primary and secondary school enrolment of females.

$\delta \boldsymbol{X}_l$ denotes once more a vector of control variables, now at the village level. Since accurate *kebeles* characteristics can be hard to ensure, one can use the *kebele's* average of the control variables provided by the household survey.

$Treatment_l$ is still our treatment dummy, indicating if the *kebele* in question was treated, and ε_l is the error term that captures all *kebele*'s unobserved determinants of our outcomes of interest, once again orthogonal to the treatment dummy, for unbiasedness.

3.4. Feasibility and Limitations

In terms of intervention costs, it seems plausible to state that community interventions and information programs rank cheaper among the various interventions to reduce child marriage. Even regarding cost effectiveness, Chae et al. (2017) reports two program examples[8] that corroborate this: the Musoden Wasalen intervention in Burkina Faso found that community dialogue cost 159$ per marriage averted while in Tanzania the conditional asset transfer cost $732 per marriage averted, both for girls aged 15-17 (Erulkar et al., 2017).

Regarding feasibility, and as evidenced throughout the research proposal, there are many organizations and partnerships in Ethiopia that work to eradicate Child Marriage. Some of them are[9]: Girls Not Brides, Population Council and African Development Aid Association. There are also organizations that specialize in community interventions or have done interventions with media to change social norms as: Tostan, Sujag Sansar Organisation,

[8] These of course might not be representative of all similar interventions.
[9] Consult the full list of reported partnerships and organizations by Girls Not Brides here.

Association of Media Women In Kenya and Population Foundation of India. Moreover, existing community radios in the region can be key partnerships in the radio program broadcast.

However, this research proposal still has some critical points worth noticing. While internal validity is ensured through correct implementation of the intervention, external validity isn't. Some differences are already noticeable between the North Gondar Area and the Amhara region (Table 2), and some are even more striking when comparing them with Ethiopia: for example in its Muslim representation, which is associated with Child Marriage incidence. Moreover, regarding global incidence of Child Marriage, the reality is extremely heterogenous and the drivers for each country might not be always the same as in Ethiopia. However, as long as social norms are sustaining the practice and the radio program is adapted to the local reality, the information intervention can be expected to yield similar results.

One other concern regarding the intervention is how it may not reach the critical individuals that sustain the change of social norms, as religious leaders. Known to be the most resistant to cultural change and those that uphold most of the traditions (especially Child Marriage and FGM/C), having these individuals taking part in change is crucial. Given the voluntary and entertainment component of the treatment, they might not be as included as in interventions that organize community discussions and target them more efficiently.

One last concern regarding our experiment, despite no evidence to substantiate it, regards the possibility of information over the consequences of Child Marriage being more positive than the current beliefs in the *kebeles*. Thus, if the current beliefs are harsher than the reality portrayed by the intervention, the experiment might have the opposite desired effect and increase the preference for Child Marriage. This will be verifiable in the survey, through the common knowledge pre-treatment.

4. Policy Implication and Conclusions

The proposed experiment will test a very powerful mechanism in the fight against Child Marriage: the development of protective social norms through a radio *edutainment* program. If the expected results are verified, besides adding to the experimental literature on the effectiveness of such programs on behavioural change, it will also confirm a comparably cheaper intervention with long-lasting impacts, that is quite easy to implement. Moreover, the success of the intervention includes important implications for public policy, namely the role of community media and the importance of its support and growth.

The benefits of ending Child Marriage for the society are numerous and well-documented, and unlike violence or abuse it is a publicly seen act that involves communities' reaction. What is lacking at the present moment is an adequate response from the community, one that disapproves of such arrangements and sanctions them. Because, as Economist John Harsanyi, Nobel Prize laureate, said: "apart from economic payoffs, social status seems to be the most important incentive and motivating force of social behaviour."

5. Appendix:

Figure 2 - Ethiopia's Regions Map (Amhara highlighted: highest Child Marriage incidence)

Drivers for Child Marriage in Ethiopia (Girls Not Brides)		
Community Preferences	**Gender Inequality**	**Poverty & Insecurity**
Traditional attitudes: social preferences for marrying young; **Traditional harmful practices:** forced/arranged unions (*absuma*) and abductions (*telefa*); **Female Genital Mutilation and Cutting (FGM/C):** a precursor to marriage and social norm; **Social Status:** instead of extreme economic necessity;	**Gender norms:** women's family role and purity; **Self-initiated marriage:** prestige, independence and lack of perceived future; **Education:** low valuation placed on a girl's education; insecurity in secondary education (abduction / rape)	**Poverty:** higher incidence in poor households and rural areas; **Insecurity:** Protecting girls from abduction and sexual assault; **Displacement:** Ethiopia hosts a high number of refugees; Somali refugees are more likely to marry young (lack of education and future);

Table 1 - Drivers for Child Marriage in Ethiopia - Girls Not Brides

*Classification of drivers was done by the author and solely for organization and communication purposes. All these dimensions are inter-connected and have multiple implications. For example, while FGM/C is a cultural tradition (community preferences) it is based on the desire to control girls' sexuality (gender inequality).

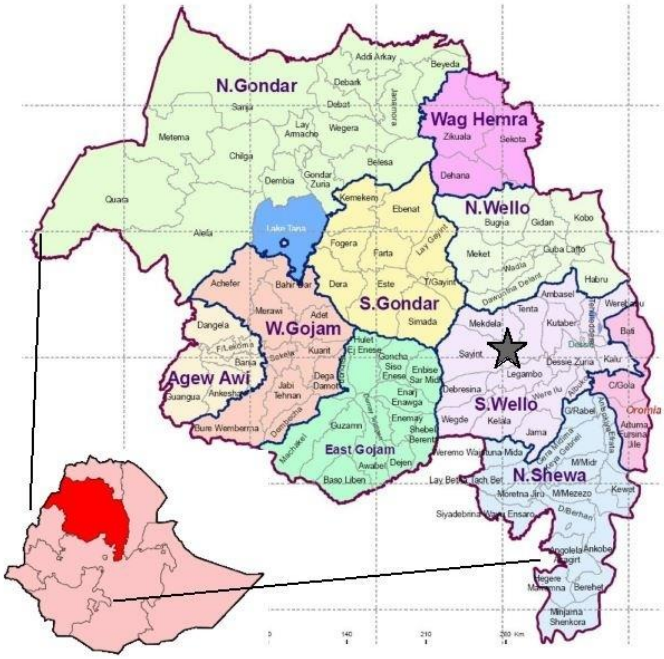
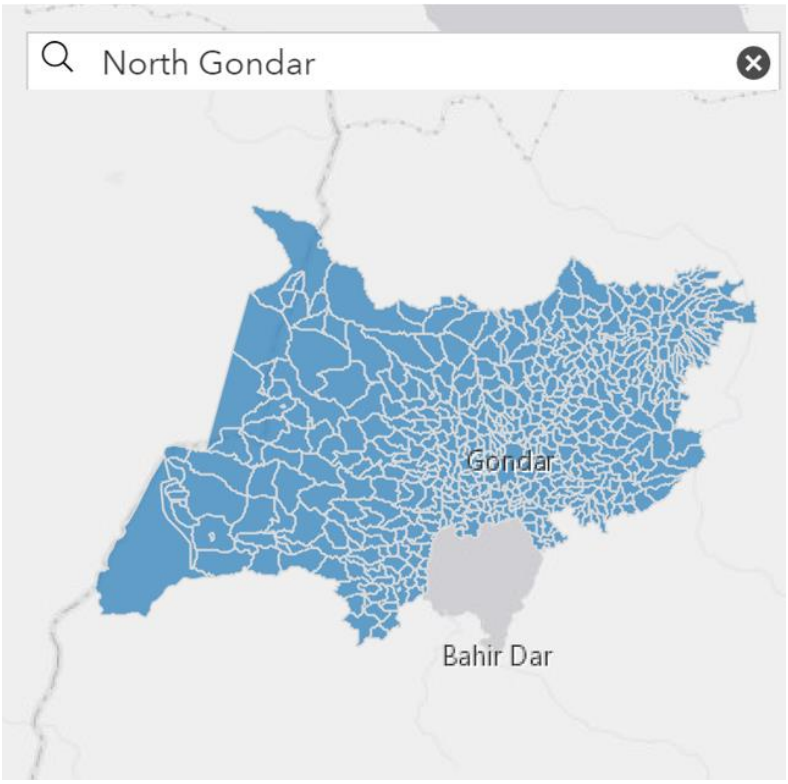


Figure 3 - Amhara's Administrative Zones



Z_NAME	North Gondar
Woreda	Count of Kebeles
Adiarikay	20
Alefa	28
Beyeda	23
Chilga	44
Chlga	1
Dabat	28
Debark	29
Dembia	45
Gondar Town	1
Gondar Zuriya	37
Jan Amora	34
Lay Armachew	34
Merab Belesa	30
Metema	25
MIrab Armacho	10
Misrak Belesa	22
Qaura	1
Quara	23
Tach Armacho	24
Takusa	25
Tegede	16
Tselemet	17
Wegera	41
Grand Total	558

Figure 4 - North Gondar's Kebeles (map and list) - ArcGIS Hub "Level 1-4 administrative boundaries for Ethiopia" Dataset.

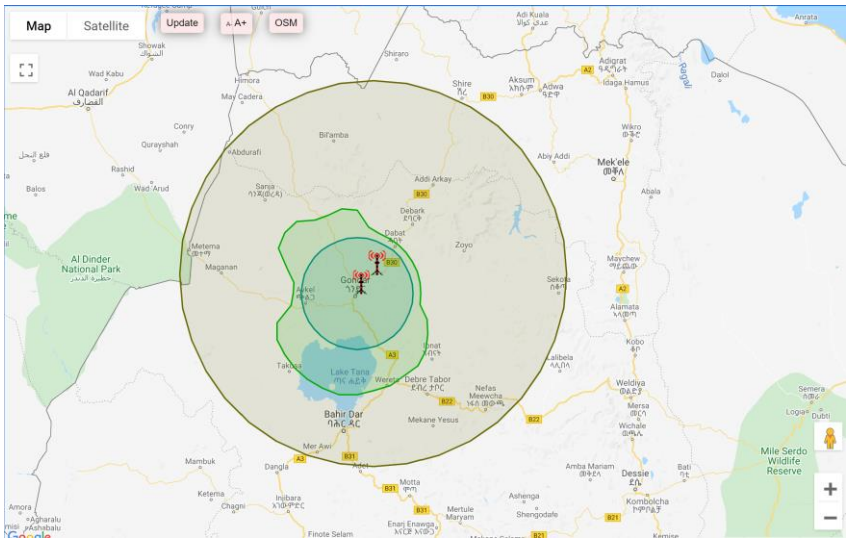


Figure 5 - Transmitters in North Gondar Coverage - https://fmscan.org/index.php

Socioeconomic and Demographical Characteristics Comparison				
Indicators	Region	North Gondar	Amhara	Ethiopia
Road Density ($km/1000km^2$)		21.2	-	30
Household's hectares of land		1.2	0.75	1.01
Population Density		63.7	108.2	92.7
Household Size		4.5	4.3	4.6
Urban inhabitants		15.8%	12.3%	14.2%
Non-farm related jobs		24.6%	21%	25%
Muslim Population		4.3%	17.2%	33.9%

Table 2 - Comparison between North Gondar, Amhara and Ethiopia on relevant indicators – World Bank (2004) and Central Statistical Agency of Ethiopia (2007)

6. References:

African Union Commission (2016) Ending Child Marriage and Stopping the Spread of HIV ...Opportunities and challenges for action.

Amin, S., Ahmed, J., Saha, J., Hossain, M., & Haque, E. (2016). Delaying child marriage through community-based skills-development programs for girls: Results from a randomized controlled study in rural Bangladesh.

Anderson, C., Kraus, M. W., Galinsky, A. D., & Keltner, D. (2012). The local-ladder effect: Social status and subjective well-being. *Psychological science*, *23*(7), 764-771.

Arias, E. (2019). How does media influence social norms? Experimental evidence on the role of common knowledge. *Political Science Research and Methods*, *7*(3), 561-578.

Baumeister, R. F., & Leary, M. R. (1995). The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological bulletin*, *117*(3), 497.

Bertrand, J. T., O'Reilly, K., Denison, J., Anhang, R., & Sweat, M. (2006). Systematic review of the effectiveness of mass communication programs to change HIV/AIDS-related behaviors in developing countries. *Health education research*, *21*(4), 567-597.

Buchmann, N., Field, E., Glennerster, R., Nazneen, S., Pimkina, S., & Sen, I. (2017). Power vs money: Alternative approaches to reducing child marriage in Bangladesh, a randomized control trial. *Unpublished Manuscript*.

Chae, S., & Ngo, T. (2017). The global state of evidence on interventions to prevent child marriage.

Cislaghi, B., & Heise, L. (2018). Theory and practice of social norms interventions: eight common pitfalls. *Globalization and health*, *14*(1), 1-10.

Corno, L., & Voena, A. (2016). *Selling daughters: age of marriage, income shocks and the bride price tradition* (No. W16/08). IFS Working Papers.

Corno, L., Hildebrandt, N., & Voena, A. (2020). Age of marriage, weather shocks, and the direction of marriage payments. *Econometrica*, *88*(3), 879-915.

Diener, E., Lucas, R. E., & Oishi, S. (2002). Subjective well-being: The science of happiness and life satisfaction. *Handbook of positive psychology*, *2*, 63-73.

Eriksson, L. M. J. (2015). Social norms theory and development economics. *World Bank Policy Research Working Paper*, (7450).

Erulkar, A. S., & Muthengi, E. (2009). Evaluation of Berhane Hewan: a program to delay child marriage in rural Ethiopia. *International perspectives on sexual and reproductive health*, 6-14.

Erulkar, A., Medhin, G., & Weissman, E. (2017). The impact and cost of child marriage prevention in rural Burkina Faso.

Erulkar, A., Medhin, G., & Weissman, E. (2017). The impact and cost of child marriage prevention in rural Tanzania.

Farr, A. C., Witte, K., Jarato, K., & Menard, T. (2005). The effectiveness of media use in health education: Evaluation of an HIV/AIDS radio campaign in Ethiopia. *Journal of health communication*, *10*(3), 225-235.

Gage, A. J. (2013). Child marriage prevention in Amhara region, Ethiopia: association of communication exposure and social influence with parents/guardians' knowledge and attitudes. *Social Science & Medicine*, *97*, 124-133.

Girls Not Brides & Association of Media Women in Kenya (2021) Using the media to address FGM/C and child marriage, Case Study.

Grady, C., Iannantuoni, A., & Winters, M. S. (2021). Influencing the means but not the ends: The role of entertainment-education interventions in development. *World Development*, *138*, 105200.

Green, D. P., Wilke, A. M., & Cooper, J. (2020). Countering violence against women by encouraging disclosure: A mass media experiment in rural Uganda. *Comparative Political Studies*, *53*(14), 2283-2320.

Hanmer, L., & Elefante, M. (2016). *The role of identification in ending child marriage*. World Bank.

IMS (2019) Assessing the capacity, challenges and sustainability of the community radio sector in Ethiopia.

Infoasaid (2011) ETHIOPIA: Media and telecoms landscape guide.

J-PAL (2017) Six rules of thumb for determining sample size and statistical power.

Makino, M., Shonchoy, A. S., & Wahhaj, Z. (2021). Early effects of the COVID-19 lockdown on children in rural Bangladesh.

Marshall, E. P., Lyytikainen, M., Jones, N., Montes, A., Pereznieto, P., & Tefera, B. (2016). Child marriage in Ethiopia. *UNICEF website, March*.

Mattes, R. B., & Teka, M. (2016). *Ethiopians' Views of Democratic Government: Fear, Ignorance, Or Unique Understanding of Democracy?*. Afrobarometer.

McGavock, T. (2021). Here waits the bride? The effect of Ethiopia's child marriage law. *Journal of Development Economics*, *149*, 102580.

Nour, N. M. (2006). Health consequences of child marriage in Africa. *Emerging infectious diseases*, *12*(11), 1644.

Pankhurst, A. (2014). Child marriage and female circumcision (FGM/C): evidence from Ethiopia.

Petit, V., & Zalk, T. N. (2019). Everybody Wants to Belong: A Practical Guide to Tackling and Leveraging Social Norms in Behavior Change Programming. *New York, NY: UNICEF*.

Sapolsky, R. M. (2004). Social status and health in humans and other animals. *Annu. Rev. Anthropol.*, *33*, 393-418.

United Nations Children's Fund (2001) Early Marriage: Child Spouses, UNICEF, Florence.

United Nations Children's Fund (2014) *Ending child marriage: Progress and prospects*. UNICEF.

United Nations Children's Fund (2018) Child marriage: Latest trends and future prospects. *New York: UNICEF*.

United Nations Population Fund (2003) Annual Report, New York.

United Nations Population Fund; Avenir Health, Johns Hopkins University; Victoria University (Australia). (2020). Impact of the COVID-19 pandemic on family planning and ending gender-based violence, female genital mutilation and child marriage.

Wang, H., & Singhal, A. (2018). Audience-centered discourses in communication and social change: the 'Voicebook'of Main Kuch Bhi Kar Sakti Hoon, an entertainment-education initiative in India. *Journal of Multicultural Discourses*, *13*(2), 176-191.

Wodon, Q., Male, C., Nayihouba, A., Onagoruwa, A., Savadogo, A., Yedan, A., ... & Petroni, S. (2017). Economic impacts of child marriage: global synthesis report.

Women, U. N. (2019). Multi-Country Analytical Study of Legislation, Policies, Interventions and Cultural Practices on Child Marriage in Africa. *UN Women*.

Worku, MA (2020). Entertainment-Education-Global Experiences and Constraints in Ethiopia. Inter. J. Acad. Res. Educ. Rev. 8(2): 41-47

Young, S. D., & Goldstein, N. J. (2021). Applying social norms interventions to increase adherence to COVID-19 prevention and control guidelines. *Preventive Medicine*, *145*, 106424.