Gender Equality, Women Empowerment and Decision Making Behavior:

The Role of Kalm on Gender Attitude and Household Decision Behavior: Case Study of Kyrgyzstan

Jamshidbek Odiljonov*
ojx.uz.95@mail.ru or s6jaodil@uni-bonn.de

* Westminster International University in Tashkent

Table of contents

The Role of Kalm on Gender Attitudes and Household Decision Behavior: Case Study of Kyrgyzstan

Abstract

This paper examines the impact of practicing the tradition of kalm (i.e., bride price) on women's empowerment using data on married couples in Kyrgyzstan from 2012. It considers both the extent to which women and men espouse egalitarian gender attitudes and the extent to which women participate in intra-household decision-making. Kalm is a widespread practice in Kyrgyzstan, in contrast to much of the rest of Central Asia, but little is known about how it influences marital quality in this context. To reduce concerns with multi-hypothesis testing, the paper constructs indices of gender attitudes and women's involvement in decision-making using principal component analysis. It finds that kalm is associated with regressive gender attitudes and women's reduced engagement in intra-household decision-making. The paper speculates that practicing kalm encourages views of women as a purchased asset rather than an equal partner who should share in important decisions. To the extent that these findings are causal, they suggest the potential benefits of discouraging the practice of kalm.

Key words*: kalm, probit, gender attitudes, women's empowerment, inter-household decision-making.*

1. Introduction

The 20th century was a critical milestone in which many societies stood against gender discrimination. Developed countries were active in initiating many campaigns about women's empowerment that ultimately paid off their costs and efforts. Mounting evidence shows that by increasing awareness about equal rights of women in society, many regions of the world could successfully bring about gender equality, contributing to improvements in living standards as well as in welfare (World Bank, 2012). Yet, in many parts of the world, women persist in disadvantaged conditions characterized by mistreatment, unequal rights, and non-egalitarian gender attitudes. In less-developed regions, one assumable factor creating a room for inequality is the convention of paying monetary assets to bride or brides' families upon marriage (Nkosi, 2011). Dating back to centuries, the tradition of bride price payments has been widely practiced mainly in the regions of Africa and Asia. Notwithstanding the gradual depreciation in its importance lately, the majority of people involved in such cultures do still, de facto, face the challenges of avoiding such customs. Existing literature depicts the payment transfers as ranging from one year's income to sometimes as large as eight times the annual earnings of the groom's family (Anderson, 2007). The significance of this issue lies in the financial burden for low-income families, which may perpetuate poverty. Further, after marriage, practicing bride price may contribute to mistreatment, physical violence, women being trapped within marriage, or women being seen as a commodity rather than a partner in decision-making because there is a price (Ngutor et al.2013).

Women's exclusion from decisions is particularly worrisome and relevant as it leads to inefficiencies in household production and is concerning from a rights-based perspective (e.g., women may even be excluded from very personal decisions like fertility, sex preference for new born babies, family size, etc, as shown by Surajit (2015)). In addition, non-egalitarian gender attitudes create concerns for the wellbeing of women as well. As a consequence, both events may sometimes result in intimate partner violence (Uthman et al. 2009). However, does bride pricing actually influence women's empowerment? Little existing research – and none for Kyrgyzstan – sheds light on this question. This paper's aim is to examine the impact of practicing the tradition of kalm (i.e., bride price) on women's empowerment using data on married couples in Kyrgyzstan from 2012. It considers both the extent to which women and men espouse egalitarian gender attitudes and the extent to which women participate in intra-household decision-making. Kalm is a widespread practice in Kyrgyzstan, in contrast to much of the rest of Central Asia, but little is known about how it influences marital quality in this context. This paper is the first one, to my knowledge, that

contributes to literature by providing the association between a tradition of kalm practice and women's empowerment in Central Asia. This research can provide policy lessons for empowering women, including related to government discouragement of the practice of kalm as much as the bride-kidnapping tradition has been discouraged, where it has successfully been reduced in Kyrgyzstan (Unicef 2018, World Bank 2017).

The data used for this research is "Life in Kyrgyzstan (2012) longitudinal survey" with questions relevant to practice of kalm, gender attitudes and reports of women's involvement in decision making process in rich quantity. The nationwide representative survey includes 2816 households with 8157 individuals.

To reduce concerns with multi-hypothesis testing, the paper constructs indices of gender attitudes and women's involvement in decision-making using principal component analysis. It finds that kalm is associated with regressive gender attitudes and women's reduced engagement in intra-household economic decision-making. The findings fold for husbands, revealing kalm's negative association with gender attitudes, whereas we find no evidence of kalm's effect on gender attitudes for wives. Regarding decision making process, we find that kalm predicts exclusion of wives from economic, financial and community related decisions, while as far as husbands are concerned there is no evidence of such relationship. The paper speculates that practicing kalm encourages views of women as a purchased asset rather than an equal partner who should share in important decisions. To the extent that these findings are causal, they suggest the potential benefits of discouraging the practice of kalm.

The paper's structure is as follows. Section 2 provides a literature review on women's empowerment and the practice of bride pricing. Section 3 explains the data that are used for our analysis. Section 4 covers our methodology, including variable measurement, econometric models, and construction of indices for our main outcome variables. Section 5 presents our main results, while Section 6 concludes with possible avenues for future research on traditional practices and women's empowerment.

2. Literature Review

The findings of many scholars are supportive of each other with respect to the ex-post effects of bride price. Through marriage, wives often suffer from unequal conditions and rights. Lowes and Nunn (2017) assert that woman's participation in decision making is undermined after the large sum of bride price payment, even in very personal aspects like fertility, sex preference of the new-born

baby, and the size of the family. That is, the practice infringes on the human rights of women to be involved in intimate, personal decision-making. Addition research revealed that bride price was associated with explosive anger and psychological distress on women (Rees et al. 2016).

Even when women wish to end their marriage, doing so is not an easy task since women are supposed to repay the bride price in case they divorce without obvious cause, leaving women trapped in the marriage unless they are financially capable of repayment (Linguere and Natascha, 2017). Platteau and Gaspart (2007) documented cases in sub-Saharan Africa where ill treatment toward women was increasing in the amount of bride price paid. The authors also asserted that there was an ambiguous relationship with education of women and bride price. On the one hand, if women are educated bride prices should increase due to women's relatively more productiveness along with their scarcity in the marriage market. On other hand, the groom might find it undesirable factor that educated women are less committed to household activities, including care of children. Kaye et al. (2005) find similar results, where men paying the bride price felt as if they bought the women often practiced physical violence and initiated conflicts with their wives. The author also adds that the decision making power of women in the household reduced, in particular, with respect to reproductive health implications. The term commodification of women was popularized as well by the studies where it ended in mistreatment towards women (Wendo, 2014). Sitompul (2009) compares the ex-post effects of bride prices in Africa and Indonesia, and she found that women in Indonesia were working harder than African counterparts to earn their "bride price" through obedience to their husbands (cited in Ashraf et al. 2018).

Ervenyu (2014) informs that in Uganda, women's right group named Mifumi has reported cases where men practicing bride price say 'I am beating my cow when they hit their wives'. They also report that "women are denied ownership of property, and it is noted that women may be expected to be sexually available to their husbands at any time and without protection" (cited in Lowers S. and Nunn N. 2017). In response, governments (i.e Zambian) discourage families from requesting large sums of bride price for their daughter. One housewife in Tanzania described what often happens when the bride price is paid, saying, 'Unfortunately, this is overdone by some people who end up regarding a woman as mere property'." Thus, the evidences suggest that bride price could be associated with physical violence by husbands. Another finding also illustrates the ferocious consequences of the bride price system. In Uganda, parents are taking young girls out of school so that they can marry earlier in return for the bride price. They might prefer receiving wealth instead of spending on a daughter's education (Siwan et al. 2018). However, there are findings revealing that

payment of bride price might be positively correlated with investment in women's education (Ashraf et al, 2015). Expecting greater incentive (to receive higher bride price) parents were found to invest more on their daughter's education in Indonesia. According to the research paper conducted by Bertocchi and et al, 2012 using data from 1989-2010 drawn by the Bank of Italy Survey on Household Income and Wealth, decision making process develops in favor of women when factors like family wealth, level of education, family size and difference in age between spouses increase. Moreover, the husband's characteristics that appeal to women played a cornerstone role in woman's intra-household bargaining power, increasing her agency in both financial and economic decisions. Once such gender equality is achieved, it usually leads to many favorable decisions that are associated with increasing the utility of spouses within households. Women, basing her assumptions on the situation in the family, can decide to work in the labor market to financially aid her family. It will, in turn, generate more additional earnings that can be invested in the human capital of their children. In addition, a healthy family environment, defined as sharing decisions together, also positively impacts children's psychology (Orth, 2018). Thus, involvement of women in the decision-making process will not only help spouses to overcome some external issues but rather it will navigate them where they are in the marriage such as caring about each other. Therein, the utility of marriage in the household could be increased to a level of optimal, reducing the uncertainty between spouses (Becker et all, 1976).

Background

Kalm

In Kyrgyzstan, bride price has been widely practiced and is referred to as kalm. It is the payment transfer such as money, livestock or expensive items that groom gives to bride or bride's family upon marriage (Bosunbaeva 2019, UNESCO). This payment transfer is not mandated as a rule nor is it written as a religious necessity. It is given in addition to "Mahr" which is religiously prerequisite. It is possible for groom or his family to decide not to pay kalm, or for the bride or her family to reject to receive kalm. The underlying purpose of practicing kalm is to show appreciation towards bride's family for raising such a daughter, implying how good her behavior, education, appearance, or other aspect is. There is not a concrete set of rules determining the correct amount and the payments accordingly vary substantially. This uncertainty might create issues in case of overpayment or underpayment. While the former could lead the bride to be under pressure to repay the price, the latter might create anxiety and fear of reduced social status for both sides of the family.

Bride's parents might think that groom's family found the bride as not worth paying more, which ultimately conveys to the groom's family that they were ungenerous.

Given difficulties of finding the right price, this tradition sometimes, though not frequently, involves agents from the both families directly negotiating the amount of payment. A representative from the bride's side is invited to discuss the wedding specifics including the payment transfers should the groom or his family not be able to decide how much to give. Based on human capital that the bride's parents invested in their daughter's education, skills, etc, the representative advises about the proper amount that should be practiced or that is being expected by bride's family. In addition to that, they also discuss how much worth of furniture and home appliance the bride is about to bring to the groom's family, which is called "sep". Occasionally, considering the sep, both families reevaluate and decide the proper amount of kalm together. However, the practice of kalm has created controversial social concerns. It has led to heated debate about whether there is a need for its practice, or if it simply amounts to the commodification of women (Rakhimdinova, IWPR).

Women's empowerment

The women in Kyrgyzstan have generally held the domestic responsibilities that were increasingly shaped by different traditional norms. Despite a long history of unstable social protection, there has recently been a remarkable progress toward women's empowerment in Kyrgyzstan. Unlike other Central Asian countries, Kyrgyz women have achieved gender parity in education level and literacy rates. The positive movements to enable every women and girl to have no legal, social or economic barriers to their empowerment are recognized by UNDP in cooperation with the government, civil society and local communities (United Nations Development Program). However, men are still considered the main breadwinner in Kyrgyzstan and women often have little agency in intra-household decision making process. Also, women's economic power (earnings) dominating men is not socially accepted well. As of 2019, there is a large gap between women's economic participation with men's, at 48.2% and 75.7%, respectively (Asian Development Bank, 2019). Also worrying concerns are the persistent high maternal mortality rates and women's weak political power in Kyrgyzstan. Unfavorable figures for women are present with examples such as prevalence of early marriages, domestic violence against women, poverty and a decline in women's participation in public sector.

3. Data Analysis

We use data from the 2012 round of the Life in Kyrgyzstan Survey. The survey started in 2010 and has been carried 5 times, with all household members tracked for each wave. The survey for 2012 was funded by the German Volkswagen and included several institutions in Central Asia and Europe with the German Institute for Economic Research (DIW Berlin) as the consortium leader. It includes both individual and household questionnaires administered to 2816 households and 8157 individuals. The survey is conducted throughout all regions of Kyrgyzstan and both in rural and urban areas. Of this data, 46.6% of the respondents are males and the rest are females. Extracting needed variables is subject to both theoretical backgrounds and expert judgments. Given our interest in studying only married pairs, we omitted single, divorced or widowed individuals. The resulting sample size is 4782, half of which is male. Below, we describe the dependent, independent, and control variables and their construction.

Key Independent Variable (KALM)

The key independent variable for the analysis is a dummy for practicing kalm and it was asked only of women. The question was, “Did you or your family receive kalm when you got married?”, with 1 for those who said that they received or paid and zero if they did not. First, individuals with a marital status of single, divorced, or widowed were also excluded from estimations as we are interested in the impact of kalm on gender attitudes and decision- making behavior among married household members. Second, men’s kalm dummy was coded using his wife’s respond. Since spouses answered their partner's ID number in the household as well, we could successfully track wives with their respective husbands that are currently in marriage. Besides a dummy variable, a variable at hand is also the amount of kalm, which is continuous. The question asks women about how many sheep could be bought at that time with the amount of given kalm. However, most women responded, “I do not know”. Such women cannot be included in regressions considering a continuous kalm variable, motivating our primary focus on the dummy variable as our outcome. Their nonresponse could mainly be due to a measurement issue since women historically rarely trade farm animals at traditional markets in Kyrgyzstan, meaning that they may not know or remember the pricing. Also probable reason is the sensitiveness to the question since they might hold a view that the amount of kalm represents women’s reputation or value.

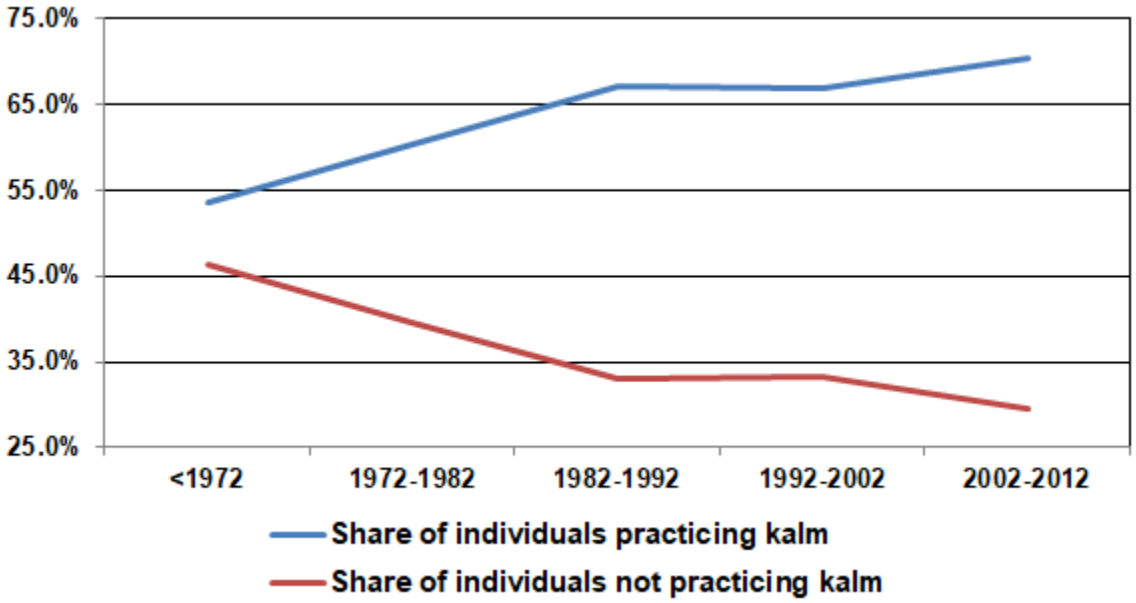
Summary statistics show that 58% (4782) of individuals out of total are currently in marriage and they have been involved in kalm tradition practice, implying that they either paid/received kalm or refused to practice kalm at the time of their marriage. Out of those, we find that 65.5% of individuals practiced kalm, and the rest simply did not or refused to practice kalm at the time of their marriage.

Total number of 1463 gave a non-zero response to the question about the amount of sheep that could have been bought at that time with the payment received. Among those who answered kalm amounts, the mean value equals to nearly 9 sheep with standard deviation of 6.62. As for the sense of this mean value in monetary terms, the average price for a head of sheep could range from $70 to $140 across regions of Kyrgyzstan (Tilakaev et al. 2016), totaling to an average value between $630 and $1260 for 9 sheep. The GDP per capita for Kyrgyzstan in 2012 was $1178 (World Bank). This gives the approximate estimated cost of practiced kalm, averaging to around the amount of GDP per capita that is certainly significant amount in Kyrgyzstan. The *Table A* breaks down the timing of kalm practice with different age groups in our sample. It underscores changes over time in both whether kalm has been practiced and the amounts of kalm payments. To better illustrate how kalm payments vary over time, we create a variable which captures the duration of the couple's marriage using their current age and their age at the time of wedding. It indicates that nearly 1 in 2 people in our sample who have married at least 40 years ago have practiced kalm. The popularity of kalm practice grows as 6 in 10 people whose marriage took place 30-39 (inclusive) years ago were found to follow the tradition. The trend of choosing to pay or receive the kalm goes up as time passes, with around 70 percent of people in our sample reporting the kalm practice in recent time span (marriages that took place in the last 10 years). The statistics clearly show that the figure starting from nearly 54% kept growing in all 10-year time spans except for 1992-2002 years and it reached over 70% for the recent marriages. One possible explanation for the rarity of kalm practice for the marriages that took place 40 years ago could be the post Second World War periods where people might not have sufficient monetary assets to compile with such tradition (*Graph A and B*).

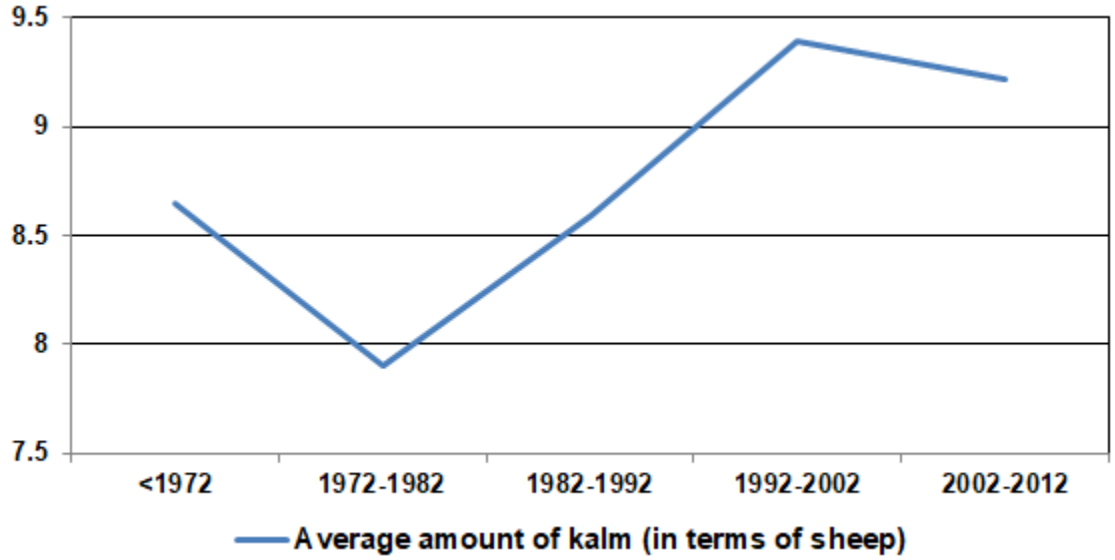
Other probable factors preventing the share of such practitioners from increasing further in 1992-2002 could be the independence years of Kyrgyzstan and combination of financial crises that might have ultimately affected the income level of individuals at that time. For the recent years where most of the individuals practice kalm could be due to the "herding behavior" that people of Central Asia want to compile with tradition and they want to show people that they are not less than their comparison group. The average amount of kalm transfers in terms of sheep rose in tandem with the kalm practices except for the time span of 40 or more years ago. If individuals in our sample who had their weddings 30-39 years ago paid an average of 7.9 sheep (relatively), the numbers grew to an average of 9.22 sheep with respect to recent marriages that took places in the last 10 years. However, this estimations are concerning as the answers for kalm amount are up to a high degree subjective.

	Kalm			Amount of Kalm		
	#	*Practiced*	*Not practiced*	*#*	*Mean*	*SD*
Total	4782	65.5%	34.5%	1463	8.83	6.62
Duration of marriages						
0-9 years	1,222	70.4%	29.6%	417	9.22	6.74
10-19	1,036	66.8%	33.2%	307	9.39	7.55
20-29	1,285	67.0%	33.0%	407	8.59	5.84
30-39	804	60.4%	39.6%	222	7.90	6.06
40+	435	53.6%	46.4%	110	8.65	7.07

Table A



Graph A



Graph B

Dependent variable (Gender Attitudes)

The survey has a block of questions dedicated to evaluating women's empowerment in Kyrgyzstan. There are 7 statements about gender attitudes and both men and women had to answer these questions (listed in *Table 8*). A list of statements asks respondents how they think about the role of women in the household and marriage. Respondents could demonstrate their attitudes by strongly agreeing, agreeing, disagreeing or strongly disagreeing with the statements in the scale of 1-4 respectively (5 does not know). One example statement there is "A man's job is to earn money; a woman's job is to look after the home and family". Agreeing or strongly agreeing with the above statement implies discrimination against women. We reverse coded answers where necessary so that higher numbers always indicate more egalitarian gender attitudes. We find gender discrimination among at least 50 percent of respondents for 5 out of the 7 statements. Approximately 70 percent of people hold the view that a husband should make important decisions rather than his wife. Further, two thirds of people agree that a man's job is to earn while a woman's is to look after house and family. And regarding careers, 60 % agree that the husband's career is more important than that of his wife. Considering education, less than a half of the respondents consider that education is more important for a boy than a girl. This could explain why, unlike in many other Central Asian countries, individuals in our sample of Kyrgyz households holding a university or higher education degree in Kyrgyzstan are roughly equal with respect to both cohorts of gender. We find no evidence that the relevance or accessibility of education for women is subject to discrimination in Kyrgyzstan. However, the share of people holding such degrees in our sample constitutes very small share of the total, with less than 20% have graduated a university. Majority have more gender egalitarian view when it comes to contribution to household income with nearly 80% agreeing that both a husband and a wife should contribute to a household income .

		Total	*Strongly disagree*	*Disagree*	*Agree*	*Strongly Agree*	*I don't know*
1	important decisions should be made by the husband rather than the wife	4,782	660	657	974	2,395	96
2	A man's job is to earn, a woman's job is to look after home and family	4,782	674	891	1,160	1,998	59
3	A woman is really fulfilled only when she becomes a mother	4,782	1,053	848	848	1,750	283
4	A working woman can establish just as warm and secure of a relationship with her children	4,782	222	436	903	3,087	134
5	A husband's career should be more important to the wife than her own	4782	820	995	965	1,884	118

6	A university education is more important for a boy than for a girl	4782	1,344	1,191	799	1,320	128
7	Both husband and wife should contribute to the household income	4782	404	544	1,240	2,483	111

Table B

Dependent variable (Decision Making Process)

The second list of questions available in the survey allows us to analyze who has the authority to make decisions in the household in the last 12 months (Listed in *Table 9*). A total of 25 questions were asked, and can be divided into the following categories: financial, non-financial, economics, marital and community related decisions. Few example questions there are, "who decides whether to buy major items? "where female household members to work? or "how many children to have?") . Answer choices to the 25 question, regarding who makes the decision, include: I myself decide, I together with my spouse, all household members, all female household members, all male household members and all children. We coded 1 for those that involve women's participation in making the decision, whether it is woman alone making the decision or jointly together with other household members. 0 is recorded for decisions made by men alone.

Vector of Control Variables

There are individual-level, basic household-level and socioeconomic-related household-level control variables. Age, age^2, a male dummy, education dummies, and number of children are individual level controls. Household level controls include age, age^2, education dummies of household head, number of household members and ethnicity. Socioeconomic household-level control variables are household assets per person in USD (most liquid assets that can be sold easily), monthly household expenditure on food and non-food per person in USD and the dummies for type of marriage. The type of marriage includes arranged, bride-capture and love marriages.

Table 1 represents some characteristics of individuals in the sample that are used to control for homogeneity in our estimations. We assume that how well educated the individuals are will ultimately impact their gender attitudes by, increasing their awareness about the value of gender equality as well as their exposure to educated women and their capabilities. Approximately 17% of people in our sample from Kyrgyzstan reported having a bachelor's or higher degrees. Gender decomposition of this variable is quite equal with 16% of males and 17% of females in the sample holding such degrees. We suspect that as income of the household rises, it should result in inclusion of women in decision making and people holding more gender egalitarian views (Fatterolf and

Rudman, 2014). To assess the welfare of households and their income level, we chose household assets, household expenditure on food and non-food as proxy variables (all converted to USD and measured as monthly per person in the household except for assets). Average monthly food and non-food expenditure per person in our sample are around $16 and $24 respectively, while household assets (most liquid) per person adds up to a bit over $5000. The sample's age ranges from 18 to 89 with average at 44. The average length of marriage in our sample is 20 years. It is expected that the duration of marriage should have an impact on decision making process among spouses as well as the gender attitudes (Garda and Alexander). In addition to that, we also have created a variable for age difference of spouses that could also play a role in determining our dependent variables.

Most areas in Kyrgyzstan are mountainous and rural and we find that two thirds of married couples in our sample live in rural areas. Included in regression analysis are dummy variables for the types of marriages that couple have. Overall, 27% and 13% of marriages are built on arranged or bride-captured respectively, while the rest iare love marriages. Also, nearly 70 percent of individuals are Kyrgyz ethnic, followed by Uzbek at 13% and Russian at 7%.

Methodology

Principal Component Analysis

In order to examine the relationship between kalm and women's empowerment in Kyrgyzstan, we test two hypotheses both at individual level: kalm's role on gender attitudes and on intra-household decision-making behavior. Since only women are asked whether they received kalm or not, we focus on currently-married couples. We match the women's response on kalm question with their respective husbands given their unique identifiers (IDs) in the household (individuals report their spouse's ID). It is not possible to match divorced or widowed women's response with their former husbands. Also, single individuals are excluded from regressions as they have not had a chance to practice kalm (or not) yet.

One might regress each of the 7 gender attitudes statements and the 25 decision making questions on kalm. However, to reduce concerns with multi-hypothesis testing, we created indices for both sets of variables using principal component analysis. We call the first our egalitarian gender attitudes index and the second our women's decision-making power index, where both are individual-level variables. Occasionally, some respondents did not answer the complete set of questions. This could be due to the fact that those questions may not be related to respondents (for example: what to use

the remittance for does not apply for households without migrants) or they simply might have refused to answer some of the questions. In such circumstances, we imputed missing data using the mean value of the variable among those in the same community and of the same gender. This prevents a drop in statistical power due to missing data. Similar imputation is done by Kosec et al. (2018), as an example. The condition for imputation requires having at least an answer for one out of 7 questions (gender attitudes) or one out of 25 questions (decision making). In case respondents did not answer any of the questions in a set, we simply left it as missing and did not impute by. In addition, before constructing our indices, we normalized the values for each individual question in each set by subtracting the sample mean and dividing the difference by the sample standard deviation (S.D).

$$Y_{ijk} = \sum_{n=1}^{N} \left(\frac{v_n^{ijk} - \mu_n}{\sigma_n}\right) N^{-1}$$

where v_n^{ijk} is the normalized value of question *n* for individual *i* and μ_n and σ_n are the sample mean and standard deviation of v_n^{ijk} respectively. N is 7 and 25 for gender egalitarian views and decision-making processes respectively.

The main regression model is the following:

$$Y_{ijk} = \alpha_1 + \beta_1 K_{ijk} + \beta_2 X_{ijk} + \theta_k + E_{ijk}$$

where *i* stands for individuals, *j* is for households and *k* indexes regions. Y_{ijk} is a measure of women's empowerment registered as gender egalitarian views and decision making power indexes at individual levels. Both indexes are normalized with zero mean and standard deviation of 1. K_{ijk} indicates the key independent variable of kalm recorded as dummy variable. X_{ijk} is a vector of individual, household and socioeconomic control variables, while θ_k controls for rayon fixed effect. In our sample for analysis, there are 45 rayons of Kyrgyzstan. Lastly, E_{ijk} is the error term. We use robust standard errors to correct for heteroskedasticity.

Results

Gender Egalitarian Views

We find a strong relationship between kalm and gender egalitarian views among married pairs in Kyrgyzstan in 2012 (Listed in *Table 2*). OLS results for kalm's influence on gender attitudes were strongly robust. As we progressively increase the number of control variables at individual and household levels, the coefficient for kalm remained strongly statistically significant and stayed nearly constant. The findings indicate that paying or receiving the kalm payments is associated with couples to have less gender egalitarian views. Specifically, practicing kalm at individual level predicts less egalitarian-views index, a -0.08 S.D decline, which is significant at the 0.05 significance level in our preferred, full-controls model. When married pairs are observed separately, the findings hold true for husbands with coefficient of -0.12 S.D (0.05 significance level), while the findings for wives are not statistically significant. To understand better which individual questions may be driving these estimates, we regress individual statements on kalm and our full set of controls to see which ones are predicted to decrease most when kalm is practiced (Listed in *Table 3).* At individual question regressions rather than index, outcomes show that first (*"Important decisions should be made by husband rather than wife*") and fifth ("*A husband's career should be more important to the wife than her own*") statements are, in particular, the main factors contributing to kalm's negative association with egalitarian-views index (at 0.01 significance level). More precisely, married individuals are more likely to agree that "important decisions should be made by husband rather than wife" (statement 1) and that a "husband's career should be more important to the wife than her own" (statement 5), with coefficients on kalm of -0.09 and -0.14 S.D, respectively. For remaining individual gender attitudes statements, we find no evidence that kalm is associated with more or less egalitarian attitudes.

In addition to kalm, there are several other significant factors predicting a less egalitarian gender attitudes index. Of those, living in rural area, being Uzbek and having a bride-capture marriage are strikingly noticeable ones. We find evidence that married individuals living in rural areas tend to have less gender egalitarian views compared to those living in urban areas, constituting the largest negative coefficient at -0.45 S.D (0.01 significance level) among other determinants. Coming from Uzbek ethnicity compared to Kyrgyz had a negative coefficient of -0.30 S.D, and having a marriage based on bride-capturing rather than typical love marriage constituted -0.11 S.D both at 0.01 significance levels. In contrast to factors negatively contributing to gender attitudes, being highly

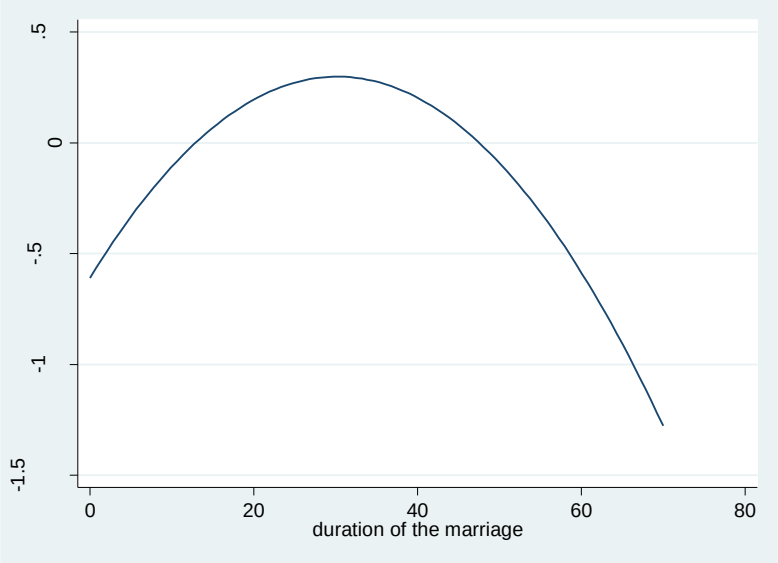
educated (holding bachelor's or above degree) significantly results in individuals having more gender egalitarian views with 0.45 S.D (0.01 significance level). Being a Russian ethnic in our sample similarly predicts more egalitarian gender attitudes, with a coefficient of 0.30 S.D (0.01 significance level). Also, greater food expenditure of the household (proxy for income) predicts that married pairs to have more gender egalitarian views.

Decision Making

The essential component of women's empowerment is also whether they are included or have agency to make decisions in the household. Running OLS on full decision making (PCA) index with Rayon fixed effects, we find rather weak evidence that kalm is associated with women's exclusion from decision making (Listed in *Table 4*). When we run OLS with individual level control variables, the coefficient for kalm is -0.07 S.D and statistically significant at 0.05 significance level. However, as we increase the number of variables from individual level to full socioeconomic control variables, the coefficient loses its statistical significance. Inclusion of age of the household head and its quadratic form leads to insignificant results. Excluding these two variables might result in concerns with omitted variable. Thus, we conclude that we find weak or no evidence that kalm has a negative relationship with all decision making index at individual level. However, when decision making behavior (all decision making index) for both genders are inspected separately, we find that kalm predicts wives reporting an exclusion from decisions at -0.08 S.D (0.1 significance level), while findings are insignificant for husband cohorts.

It is possible, of course, that while kalm overall does not predict less involvement of women in decision-making, that it does influence women's decision-making in certain, specific domains. To consider this possibility, we look at the sub-indices of decision described earlier. Our regression analysis shows that practicing kalm is associated with lower women's involvement in economic decision-making—possibly an especially important type of decision, with coefficient being a modest -0.08 S.D at 0.05 significance level. We find no evidence of kalm's association with the rest of the sub-indices when regressed on both husbands and wives together (Listed in *Table 5*). However, as we observe husbands and wives separately, we find that kalm strongly predicts wives to report being excluded from economic, financial and community related decisions. Specifically, coefficients of decision making sub-indices for wives are -0.12 S.D (economic), -0.09 S.D (financial) and -0.10 S.D (community related) all at 0.05 significance levels (*Table 7*). Findings for husbands, on the other hand, are rather not significant with respect to all decision making sub-indices (*Table 6*).

Interesting notes in our sub-indices OLS regressions are that irrespective of the decision type, duration of marriage has strong association with decision making behavior. It is in a concave shape, implying that each additional year in length of marriage predicts inclusion of women in decision making process up to a certain point where the slope then becomes negative (*Graph C*). Also, we find that an increase in number of children predicts sharing decisions among spouses, with coefficient of 0.03 S.D at 0.01 significance level.



Graph C

Conclusion

This paper aims to close the gap in the existing literature about the role of kalm on women's empowerment. We find strong evidence that paying or receiving kalm payments causes married couples to have less egalitarian gender views. In addition, practicing kalm leads individuals to exclude women from economic decision-making. Existing work has acknowledged that the practice of bride pricing has more negative outcomes than positive ones, especially on the well-being of women. With the assumption that gender inequality is shaken partially at the expense of practicing kalm, which is a sign of pricing the women, our findings have policy implications in Kyrgyzstan and elsewhere. In Kyrgyzstan, government should discourage the kalm custom in a similar way as they successfully did with bride kidnapping. Efforts to make equal rights and opportunities between genders could make the life of many women as well as men in Kyrgyzstan easier, and ultimately ensure healthy marriages and sustainable growth in welfare. Although many face challenges in attempting to follow this tradition, including mental and material stress, they do not find courage to bring it to the public since they worry that others might think less of them (Rakhimdinova, Global

voices). In addition to that, kalm could also cause people who do not have enough as a payment to rather choose to kidnap the bride (another tradition of Kyrgyzstan) and avoid these all payment negotiation and the costs (Skoch 2010). Although bride kidnapping is prohibited by a law in Kyrgyzstan it has still been practiced by some. Thus, kalm in a way could give a rise to possibility of bride-kidnapping tradition as well which is abusing human being (VOA 2019). The empirical evidence from this study could eventually lay the foundation to solve this significant issue. Especially, low-income households could then have one less problem to worry about on the edge of organizing a wedding. Also, there will be no sense of monetary debt of a woman in front of her husband, allowing for healthier decisions and attitudes among spouses. If no actions are taken, this custom will continue to maintain unfavorable trends in gender inequality, burden many families financially, leaves less chance to invest in the human capital of household members, and be one permanent source of mistreatment towards women.

Table 1: Summary Statistics

VARIABLES	(1) N	(2) mean	(3) sd	(4) min	(5) max
Dummy – practice of kalm	4,994	0.647	0.478	0	1
Dummy – male	4,994	0.494	0.500	0	1
Age of individuals	4,994	42.68	13.96	18	97
Age^2 of individuals	4,994	2,088	1,298	324	7,921
Number of children	4,914	2.974	1.797	0	12
Duration of marriage	4,966	19.76	13.86	0	70
$Duration^2$ of marriage	4,966	582.4	704.8	0	4,900
Dummy – living in rural	4,994	0.669	0.471	0	1
Dummy – no more than basic education	4,994	0.116	0.320	0	1
Dummy – completed secondary education	4,994	0.717	0.451	0	1
Dummy – completed university education	4,994	0.168	0.374	0	1
Number of household members	4,994	5.965	2.456	2	15
Age of household head	4,994	52.87	13.17	20	97
Age^2 of household head	4,994	2,969	1,466	400	9,409
Dummy – head has no more than basic education	4,994	0.146	0.353	0	1
Dummy – head completed secondary education	4,994	0.698	0.459	0	1
Dummy – head completed university education	4,994	0.156	0.363	0	1
Dummy – arranged marriage	4,994	0.273	0.445	0	1
Dummy – loved marriage	4,994	0.601	0.490	0	1
Dummy – bride capture marriage	4,994	0.128	0.334	0	1
Frequency of electricity disruptions	4,994	1.704	1.119	0	6
Dummy – Kyrgyz ethnicity	4,994	0.678	0.467	0	1
Dummy – Uzbek ethnicity	4,994	0.135	0.342	0	1
Dummy – Russian ethnicity	4,994	0.0735	0.261	0	1
Dummy – other ethnicity	4,994	0.114	0.318	0	1
Household assets per person in USD	4,994	19,626	267,101	0	1.000e+07
Monthly household food expenditure per person in USD	4,992	16.32	8.424	1.702	67.61
Monthly household non-food expenditure per person in USD	4,994	24.66	22.53	1.571	257.9
Dummy – living with parents or parents in law	4,994	0.244	0.430	0	1

Source: Author's calculations (Life in Kyrgyzstan Survey 2012)
Notes: Sample is currently married pairs who have been involved in kalm tradition practice (either practiced or refused practice) and appear at least once in regressions in this paper.

Table 2: OLS Results for Egalitarian Gender Views Index
(Normalized with zero mean and S.D of 1, missing imputed, robust standard errors)

VARIABLES	All Individual Controls	All Ind-HH Controls	All Full Controls	Husbands Full Controls	Wives Full Controls
Dummy - Kalm	-0.089**	-0.079**	-0.077**	-0.119**	-0.038
	(0.036)	(0.035)	(0.035)	(0.048)	(0.050)
Age	0.004	0.001	0.002	-0.00	0.008
	(0.003)	(0.003)	(0.003)	(0.00)	(0.006)
Age squared	-0.00**	-0.00	-0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
# of children	-0.020**	-0.0117	-0.008	0.0036	-0.016
	(0.009)	(0.010)	(0.010)	(0.014)	(0.014)
Duration of marriage	0.008**	0.007*	0.009**	0.008	0.007
	(0.003)	(0.004)	(0.004)	(0.005)	(0.00)
Duration of marriage squared	-0.00**	-0.00	-0.00*	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Dummy – Secondary edu	0.226***	0.232***	0.227***	0.089	0.363***
	(0.046)	(0.049)	(0.049)	(0.083)	(0.066)
Dummy – High edu	0.387***	0.458***	0.452***	0.039	0.679***
	(0.057)	(0.067)	(0.067)	(0.116)	(0.086)
Dummy – male	-0.248***	-0.244***	-0.246***	-	-
	(0.027)	(0.026)	(0.027)		
Constant	0.385***	0.880***	0.755***	0.109	1.021***
	(0.131)	(0.221)	(0.231)	(0.321)	(0.322)
Rayon Fixed Effect	Yes	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes
Household Controls	-	Yes	Yes	Yes	Yes
Socioeconomic Controls	-	-	Yes	Yes	Yes
Observations	4,825	4,825	4,823	2,393	2,430
R-squared	0.221	0.251	0.254	0.251	0.280

Source: Author's calculations (Life in Kyrgyzstan Survey 2012)

Notes: Sample is currently married pairs who have been involved in kalm tradition practice (either practiced or refused practice) and appear at least once in regressions in this paper. The universe for column 1 is all currently married pairs. The dependent variable is egalitarian gender views index (straight mean, normalized with zero mean and S.D of 1), simple OLS regression on kalm dummy with individual controls variables (age, age squared, number of children, education dummies of individuals, duration of marriage and its square form, male dummy and ethnicity). Column 2, in addition to variables in column 1, includes household controls (number of household members, age of the household head and its squared form, education dummies for household head, dummies for type of marriages of individuals and frequency of electricity disruption). Column 3 is full control variables including socioeconomic household control variables (household assets per person, monthly food and nonfood expenditure per person all in USD, and whether individuals live with their parents or parents-in-law). Column 4 and 5 are separate regression analysis for husbands and wives respectively with full control variables. All columns include rayon fixed effects and are robust for standard errors. Standard errors are in parentheses. *** indicates p<0.01; ** indicates p<0.05; and * indicates p<0.10.

Table 3: OLS Results for Individual Egalitarian Gender Views
(Normalized with zero mean and S.D of 1, missing imputed, robust standard errors)

VARIABLES	Statement 1	Statement 2	Statement 3	Statement 4	Statement 5	Statement 6	Statement 7
Dummy - Kalm	-0.091***	-0.050	0.039	0.045	-0.141***	-0.049	-0.04
	(0.035)	(0.036)	(0.034)	(0.035)	(0.036)	(0.036)	(0.035)
Age	0.007	0.011***	-0.004	-0.005	-0.001	0.006	-0.002
	(0.004)	(0.004)	(0.004)	(0.003)	(0.004)	(0.003)	(0.004)
Age squared	-0.00**	-0.00**	-0.00	0.00	0.00	-0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
# of children	-0.011	-0.015	0.011	-0.005	0.005	-0.003	-0.013
	(0.010)	(0.011)	(0.009)	(0.010)	(0.01)	(0.01)	(0.01)
Duration of marriage	0.006	0.005	0.01**	0.010**	0.004	-0.001	-0.001
	(0.004)	(0.004)	(0.004)	(0.004)	(0.00)	(0.00)	(0.004)
Duration of marriage squared	-0.00	-0.00	-0.00	-0.00**	-0.00	0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Dummy – Secondary edu	0.143***	0.086*	0.084*	0.038	0.125**	0.217***	0.144***
	(0.047)	(0.048)	(0.049)	(0.054)	(0.051)	(0.052)	(0.055)
Dummy – High edu	0.246***	0.264***	0.163**	0.133*	0.253***	0.34***	0.265***
	(0.066)	(0.069)	(0.064)	(0.069)	(0.069)	(0.069)	(0.069)
Dummy – male	-0.279***	-0.158***	-0.104***	0.004	-0.168***	-0.163***	-0.044
	(0.027)	(0.029)	(0.026)	(0.028)	(0.029)	(0.028)	(0.028)
Constant	1.040***	-0.008	-0.020	1.210***	0.186	0.314	0.067
	(0.240)	(0.261)	(0.247)	(0.235)	(0.248)	(0.258)	(0.267)
Rayon Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Household Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Socioeconomic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,823	4,823	4,823	4,823	4,823	4,823	4,823
R-squared	0.268	0.160	0.319	0.206	0.204	0.196	0.215

Source: Author's calculations (Life in Kyrgyzstan Survey 2012)

Notes: Sample is currently married pairs who have been involved in kalm tradition practice (either practiced or refused practice) and appear at least once in regressions in this paper The dependent variable is individual egalitarian gender views statements (normalized with zero mean and S.D of 1, imputed by gender and community mean). Statements are provided in Table 8. All columns are simple OLS regressions on kalm dummy with full controls variables age, age squared, number of children, education dummies of individuals, duration of marriage and its square form, male dummy, ethnicity, number of household members, age of the household head and its squared form, education dummies for household head, dummies for type of marriages of individuals, frequency of electricity disruption, household assets per person, monthly food and nonfood expenditure per person all in USD, and whether individuals live with their parents or parents-in-law. All columns include rayon fixed effects and are robust for standard errors. Standard errors are in parentheses. *** indicates p<0.01; ** indicates p<0.05; and * indicates p<0.10.

Table 4: OLS Results for Decision Making Index

(Normalized with zero mean and S.D of 1, missing imputed, robust standard errors)

VARIABLES	All Individual Controls	All Ind-HH Controls	All Full Controls	Husbands Full Controls	Wives Full Controls
Dummy - Kalm	-0.105***	-0.042	-0.038	0.002	-0.078*
	(0.034)	(0.033)	(0.033)	(0.044)	(0.047)
Age	0.021***	0.019***	0.012***	0.018***	0.002
	(0.004)	(0.004)	(0.004)	(0.005)	(0.006)
Age squared	-0.00***	-0.00*	-0.00***	-0.00***	-0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
# of children	0.047***	0.038***	0.027***	0.020	0.030**
	(0.009)	(0.010)	(0.010)	(0.013)	(0.014)
Duration of marriage	0.044***	0.039***	0.027***	0.025***	0.031***
	(0.004)	(0.004)	(0.004)	(0.005)	(0.006)
Duration of marriage squared	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Dummy – Secondary edu	0.029	0.073	0.052	-0.0271	0.082
	(0.045)	(0.048)	(0.048)	(0.072)	(0.068)
Dummy – High edu	0.063	0.092	0.088	0.077	0.0639
	(0.054)	(0.060)	(0.060)	(0.100)	(0.081)
Dummy – male	-0.144***	-0.177***	-0.119***	-	-
	(0.026)	(0.024)	(0.025)		
Constant	-0.430***	1.939***	1.396***	1.094***	1.594***
	(0.130)	(0.212)	(0.220)	(0.299)	(0.312)
Rayon Fixed Effect	Yes	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes
Household Controls	-	Yes	Yes	Yes	Yes
Socioeconomic Controls	-	-	Yes	Yes	Yes
Observations	4,839	4,839	4,837	2,396	2,441
R-squared	0.281	0.365	0.381	0.422	0.402

Source: Author's calculations (Life in Kyrgyzstan Survey 2012)

Notes: Sample is currently married pairs who have been involved in kalm tradition practice (either practiced or refused practice) and appear at least once in regressions in this paper. The universe for column 1 is all currently married pairs. The dependent variable is decision making index (straight mean, normalized with zero mean and S.D of 1). The full list of questions for decision making is provided in *Table 10*. simple OLS regression on kalm dummy with individual controls variables (age, age squared, number of children, education dummies of individuals, duration of marriage and its square form, male dummy and ethnicity). Column 2, in addition to variables in column 1, includes household controls (number of household members, age of the household head and its squared form, education dummies for household head, dummies for type of marriages of individuals and frequency of electricity disruption). Column 3 is full control variables including socioeconomic household control variables (household assets per person, monthly food and nonfood expenditure per person all in USD, and whether individuals live with their parents or parents-in-law). Column 4 and 5 are separate regression analysis for husbands and wives respectively with full control variables. All columns include rayon fixed effects and are robust for standard errors. Standard errors are in parentheses. *** indicates p<0.01; ** indicates p<0.05; and * indicates p<0.10.

Table 5: OLS Results for Decision Making Sub-Indices
(Normalized with zero mean and S.D of 1, missing imputed, robust standard errors)

VARIABLES	All Marital	All Economic	All Financial	All Non-financial	All Community
Dummy - Kalm	0.020	-0.077**	-0.043	-0.002	-0.030
	(0.039)	(0.033)	(0.033)	(0.038)	(0.034)
Age	0.015***	0.009**	0.013***	0.005	0.007*
	(0.005)	(0.003)	(0.004)	(0.004)	(0.004)
Age squared	-0.00***	-0.00***	-0.00***	-0.00***	-0.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
# of children	0.021*	0.012	0.013	0.046***	0.010
	(0.011)	(0.010)	(0.010)	(0.011)	(0.010)
Duration of marriage	0.020***	0.028***	0.027***	0.014***	0.018***
	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)
Duration of marriage squared	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Dummy – Secondary edu	0.049	0.051	0.086*	-0.002	-0.0412
	(0.057)	(0.049)	(0.047)	(0.056)	(0.049)
Dummy – High edu	-0.092	0.072	0.129**	0.052	0.051
	(0.074)	(0.061)	(0.060)	(0.069)	(0.064)
Dummy – male	-0.014	-0.059**	-0.119***	-0.025	-0.302***
	(0.030)	(0.026)	(0.026)	(0.028)	(0.028)
Constant	-0.430***	1.939***	1.396***	1.094***	1.594***
	(0.130)	(0.212)	(0.220)	(0.299)	(0.312)
Rayon Fixed Effect	Yes	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes
Household Controls	Yes	Yes	Yes	Yes	Yes
Socioeconomic Controls	Yes	Yes	Yes	Yes	Yes
Observations	3,447	4,832	4,834	4,471	4,721
R-squared	0.350	0.352	0.352	0.271	0.281

Source: Author's calculations (Life in Kyrgyzstan Survey 2012)

Notes: Sample is currently married pairs who have been involved in kalm tradition practice (either practiced or refused practice) and appear at least once in regressions in this paper The dependent variables are sub-decision making indices (normalized with zero mean and S.D of 1, imputed by gender and community mean). Questions in sub-decision making categories are provided in Table 10. All columns are simple OLS regressions on kalm dummy with full controls variables age, age squared, number of children, education dummies of individuals, duration of marriage and its square form, male dummy, ethnicity, number of household members, age of the household head and its squared form, education dummies for household head, dummies for type of marriages of individuals, frequency of electricity disruption, household assets per person, monthly food and nonfood expenditure per person all in USD, and whether individuals live with their parents or parents-in-law. All columns include rayon fixed effects and are robust for standard errors. Standard errors are in parentheses. *** indicates p<0.01; ** indicates p<0.05; and * indicates p<0.10.

Table 6: OLS Results for Decision Making Sub-Indices for Husbands
(Normalized with zero mean and S.D of 1, missing imputed, robust standard errors)

VARIABLES	Husbands Marital	Husbands Economic	Husbands Financial	Husbands Nonfinancial	Husbands Community
Dummy - Kalm	0.086	-0.038	0.007	-0.002	0.033
	(0.056)	(0.044)	(0.045)	(0.051)	(0.048)
Age	0.021***	0.015***	0.022***	0.012*	0.009*
	(0.007)	(0.004)	(0.005)	(0.006)	(0.005)
Age squared	-0.00*	-0.00***	-0.00***	-0.00***	-0.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
# of children	0.012	0.004	0.003	0.049***	-0.004
	(0.017)	(0.013)	(0.013)	(0.014)	(0.014)
Duration of marriage	0.021***	0.025***	0.026***	0.009	0.021***
	(0.006)	(0.005)	(0.005)	(0.006)	(0.005)
Duration of marriage squared	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Dummy – Secondary edu	0.072	-0.0343	-0.0412	0.005	-0.138*
	(0.095)	(0.070)	(0.069)	(0.097)	(0.075)
Dummy – High edu	0.016	0.044	0.063	0.096	0.009
	(0.123)	(0.098)	(0.099)	(0.133)	(0.107)
Constant	0.470	1.055***	0.903***	1.386***	0.856**
	(0.430)	(0.311)	(0.318)	(0.316)	(0.346)
Rayon Fixed Effect	Yes	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes
Household Controls	Yes	Yes	Yes	Yes	Yes
Socioeconomic Controls	Yes	Yes	Yes	Yes	Yes
Observations	1,701	2,393	2,394	2,215	2,341
R-squared	0.365	0.383	0.381	0.304	0.292

Source: Author's calculations (Life in Kyrgyzstan Survey 2012)

Notes: Sample is currently married husbands only who have been involved in kalm tradition practice (either practiced or refused practice) and appear at least once in regressions in this paper The dependent variables are sub-decision making indices (normalized with zero mean and S.D of 1, imputed by gender and community mean). Questions in sub-decision making categories are provided in Table 10. All columns are simple OLS regressions on kalm dummy with full controls variables age, age squared, number of children, education dummies of individuals, duration of marriage and its square form, ethnicity, number of household members, age of the household head and its squared form, education dummies for household head, dummies for type of marriages of individuals, frequency of electricity disruption, household assets per person, monthly food and nonfood expenditure per person all in USD, and whether individuals live with their parents or parents-in-law. All columns include rayon fixed effects and are robust for standard errors. Standard errors are in parentheses. *** indicates p<0.01; ** indicates p<0.05; and * indicates p<0.10

Table 7: OLS Results for Decision Making Sub-Indices for Wives
(Normalized with zero mean and S.D of 1, missing imputed, robust standard errors)

VARIABLES	Wives Marital	Wives Economic	Wives Financial	Wives Non-financial	Wives Community
Dummy - Kalm	-0.044	-0.116**	-0.094**	0.003	-0.101**
	(0.055)	(0.047)	(0.046)	(0.055)	(0.047)
Age	0.011	0.001	0.002	-0.001	-0.00
	(0.008)	(0.00)	(0.006)	(0.007)	(0.006)
Age squared	-0.00**	-0.00**	-0.00**	-0.00***	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
# of children	0.026	0.017	0.020	0.038**	0.026*
	(0.016)	(0.014)	(0.014)	(0.016)	(0.014)
Duration of marriage	0.018**	0.033***	0.031***	0.022***	0.019***
	(0.008)	(0.006)	(0.006)	(0.006)	(0.006)
Duration of marriage squared	-0.00***	-0.00***	-0.00***	-0.00***	-0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Dummy – Secondary edu	0.029	0.074	0.148**	-0.011	-0.013
	(0.078)	(0.070)	(0.066)	(0.074)	(0.067)
Dummy – High edu	-0.162	0.062	0.147*	-0.001	0.025
	(0.098)	(0.083)	(0.082)	(0.088)	(0.083)
Constant	1.031**	1.406***	1.486***	1.621***	1.370***
	(0.447)	(0.321)	(0.337)	(0.347)	(0.325)
Rayon Fixed Effect	Yes	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes
Household Controls	Yes	Yes	Yes	Yes	Yes
Socioeconomic Controls	Yes	Yes	Yes	Yes	Yes
Observations	1,746	2,439	2,440	2,256	2,380
R-squared	0.371	0.369	0.370	0.314	0.336

Source: Author's calculations (Life in Kyrgyzstan Survey 2012)

Notes: Sample is currently married wives only who have been involved in kalm tradition practice (either practiced or refused practice) and appear at least once in regressions in this paper The dependent variables are sub-decision making indices (normalized with zero mean and S.D of 1, imputed by gender and community mean). Questions in sub-decision making categories are provided in Table 10. All columns are simple OLS regressions on kalm dummy with full controls variables age, age squared, number of children, education dummies of individuals, duration of marriage and its square form, ethnicity, number of household members, age of the household head and its squared form, education dummies for household head, dummies for type of marriages of individuals, frequency of electricity disruption, household assets per person, monthly food and nonfood expenditure per person all in USD, and whether individuals live with their parents or parents-in-law. All columns include rayon fixed effects and are robust for standard errors. Standard errors are in parentheses. *** indicates $p<0.01$; ** indicates $p<0.05$; and * indicates $p<0.10$

Table 8: Gender Attitudes Statements

1	Important decisions should be made by the husband rather than the wife	***Answers:***
2	A man's job is to earn, a woman's job is to look after home and family	*Strongly Disagree*
3	A woman is really fulfilled only when she becomes a mother	*Disagree*
4	A working woman can establish just as warm and secure of a relationship with her children	*Agree*
5	A husband's career should be more important to the wife than her own	*Strongly Agree*
6	A university education is more important for a boy than for a girl	*I do not know*
7	Both husband and wife should contribute to the household income	

Table 9: Decision making questions

Which member of the family had the main decision-making authority for the following activities in the last 12 months?

1	what to grow in garden
2	where to shop
3	whether to buy major items (e.g. car, house)
4	whether or not to lend money to others
5	how much money to lend to others
6	whether or not to borrow money from others
7	how much money to borrow from others
8	how to name the newborns
9	how many children to have
10	children's well-being/health
11	whether children attend school
12	whether children do their homework
13	marriage of male household members
14	marriage of female household members
15	how much kalym to pay for marriage
16	where male household member should work
17	where female household member should work
18	how much to spend of household income
19	how much to save of household income
20	where to invest household income
21	negotiating with neighbours
22	participation to discuss community issues
23	migration of a household member
24	how to use remittances
25	taking care of elderly

Answers:
Myself
My spouse
I together with my spouse
All female hh members
All male hh members
All hh members together
My parents or parents-in-law
Children (under 18)

Table 10: Decision Making Indices by categories

Decision Making Sub-indices		
Marital	*Question 13*	marriage of male household members
	Question 14	marriage of female household members
	Question 15	how much kalym to pay for marriage
Economic	*Question 1*	what to grow in garden
	Question 2	where to shop
	Question 3	whether to buy major items (e.g. car, house)
	Question 16	where male household member should work
	Question 17	where female household member should work
	Question 23	migration of a household member
Financial	*Question 4*	whether or not to lend money to others
	Question 5	how much money to lend to others
	Question 6	whether or not to borrow money from others
	Question 7	how much money to borrow from others
	Question 18	how much to spend of household income
	Question 19	how much to save of household income
	Question 20	where to invest household income
	Question 24	how to use remittances
Non-financial	*Question 8*	how to name the newborns
	Question 9	how many children to have
	Question 10	children's well-being/health
	Question 11	whether children attend school
	Question 12	whether children do their homework
	Question 25	taking care of elderly
Community	*Question 21*	participation to discuss community issues
	Question 22	migration of a household member

4. Bibliography

- ADB (2019). *Kyrgyz Republic: Country Gender Assessment*. Available from https://www.adb.org/sites/default/files/institutional-document/546966/kyrgyz-republic-country-gender-assessment-2019.pdf [Accessed 29, June 2020].
- Anukriti Sh. (2017). *Marriage Markets in Developing Countries*. Available from http://ftp.iza.org/dp10556.pdf [Accessed 14, July 2019].
- Anukriti S. and et al. (2019). Dowry*: Household Responses to Expected Marriage Payments*. Available from https://www2.bc.edu/s-anukriti/dowry.pdf [Accessed 22, July 2019].
- Ashraf et al. (2018). *Bride Price and Female Education*. Available from https://scholar.harvard.edu/files/nunn/files/paper_draft_jpe_revision_february14_2018.pdf [Accessed 19, February 2020]
- Becker, Gary S. and Landes, Elisabeth M. and Michael, Robert T., (1976). *Economics of Marital Instability*. NBER Working Paper No. w0153. Available from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=260343 [Accessed 15 February 2019].
- Bertocchi et al. (2012). *Is it Money or Brains? The Determinants of Intra-Family Decision Power*. Available from https://www.researchgate.net/publication/251324488_Is_it_Money_or_Brains_The_Determinants_of_Intra-Family_Decision_Power [Accessed 21, June 2020].
- Bosunbaeva Ch. (2019). *Kyrgyz Traditional Wedding Customs and Rituals*. Available from https://www.unesco-ichcap.org/kyrgyz-traditional-wedding-customs-and-rituals/. [Accessed 20, July 2019].
- Deborah J. (2009). *Decisions, Desires and Diversity: Marriage Practices in Afghanistan.* Available from https://www.refworld.org/pdfid/4992cc722.pdf [Accessed 2, July 2019].
- Evelyn L. (2006). *Age at Marriage and Marital Instability: Revisiting the Becker-Lendes-Michael Hypothesis.* Available from https://link.springer.com/article/10.1007/s00148-006-0092-9 [Accessed 10 November 2018].
- Fetterolf J. and Rudman L. (2014). *Gender Inequality in the Home: The Role of Relative Income, Support for Traditional Gender Roles, and Perceived Entitlement*. Available from https://www.researchgate.net/publication/267816547_Gender_Inequality_in_the_Home_The_Role_of_Relative_Income_Support_for_Traditional_Gender_Roles_and_Perceived_Entitlement [Accessed 28, March 2020].
- Garda L. and Alexander M. Marriage *Related Decision Making among Young People: What Influences Their Involvement and Why should Young People be Involved- Evidence from Community Based Survey in Rural and Urban Pune District, India*. Available from https://iussp2009.princeton.edu/papers/91390 [Accessed 19, June 2020].
- Gary, Becker (1973) *The Journal of Political Economy*: *Theory of Marriage: Part 1* Available from http://www.jstor.org/stable/1831130 [Accessed 15 February 2019].
- Gary, Becker (1973-74) *The Journal of Political Economy*: *Theory of Marriage: Part 2*. Available from http://www.jstor.org/stable/1829987 [Accessed 15 February 2019].
- Gary, Becker and Elisabeth (1976). *The Journal of Political Economy: An Economic Analysis of Marital Instability:* Available from http://www.jstor.org/stable/1837421 [Accessed 15 February 2019].
- Jenny M, (2013). *The Bridal Income and Education Effects on the Dowry: A Case Study in Rural Karnataka, India.* Available from https://pdfs.semanticscholar.org/100d/c3f3a2b3d4ca3eb2f8436c689e5153724781.pdf [Accessed 10, July 2019].

- John A. (2016). *Dowry and Bride Price*. Available from https://www.researchgate.net/publication/305348271_Dowry_and_Bride-Price [Accessed 15, July 2019].
- Kaye et al. (2005). *Implications of Bride Price on Domestic Violence and Reproductive Health in Wakiso District, Uganda*. Available from https://www.ajol.info/index.php/ahs/article/view/6968 [Accessed 3, March 2020].
- Kosec et al. (2018). *Aspirations and Women's Empowerment: Evidence from Kyrgyzstan*. Available from https://www.ifpri.org/publication/aspirations-and-womens-empowerment-evidence-kyrgyzstan-0 [Accessed 1, March 2020].
- Linguere M, (2016). *Bride Price and Fertility Decisions: Evidence from Rural Senegal*. Available from https://www.tandfonline.com/doi/full/10.1080/00220388.2016.1208178 [Accessed 5, August 2019].
- Linguere M. and Natascha W. (2015). Bride *Price and Fertility Decisions: Evidence from Rural Senegal.* Available from https://www.tandfonline.com/doi/full/10.1080/00220388.2016.1208178 [Accessed 5, July 2019].
- Lowes S. and Nunn N. (2017). *Bride Price and the Wellbeing of Women*. Available from https://scholar.harvard.edu/files/nunn/files/wp2017-131.pdf [Accessed 17, May 2020].
- Meena L. and Sayam A. (2016). *Dowry in India and Bride Price in Thailand.* Available from https://www.tci-thaijo.org/index.php/jtir/article/view/64824/60524 [Accessed 10, August 2019].
- Nava and et al. (2015). *Bride Price and Female Education.* Available from https://www.nber.org/papers/w22417 [Accessed 2, August 2019].
- Nava A. (2009). *Spousal Control and Intra-Household Decision Making: An Experimental Study in the Philippines*. Available from https://www.povertyactionlab.org/sites/default/files/publications/206_335%20Spousal%20control%20and%20intra-household%20decision%20making%20in%20the%20Philippines%20AER%20Sep%202009.pdf [Accessed 1, July 2019].
- Nkosi S. (2011). Lobola: *Black Student's Perceptions of its Role on Gender Power Dynamics*. Available from http://wiredspace.wits.ac.za/handle/10539/10376 [Accessed 20, April 2020].
- Ngutor et al. (2013). *The Effects of High Bride-Price on Marital Stability*. Available from http://iosrjournals.org/iosr-jhss/papers/Vol17-issue5/K01756570.pdf?id=8406 [Accessed 21, April 2020].
- Orth U. (2018). *The Family Environment in Early Childhood Has a Long-Term Effect on Self-Esteem: A Longitudinal Study from Birth to Age 27 Years*. Available fromhttps://www.researchgate.net/publication/312332580_The_Family_Environment_in_Early_Childhood_Has_a_Long-Term_Effect_on_Self-Esteem_A_Longitudinal_Study_From_Birth_to_Age_27_Years [Accessed 29, May 2020].
- Platteau J. and Gaspart F. (2007*). The Preserve Effects of High Brideprices*. Available from https://www.sciencedirect.com/science/article/abs/pii/S0305750X0700054X [Accessed 8, June 2020].
- Rakhimdinova A. *Kyrgyz Bride Price Controversy*. Available from https://iwpr.net/global-voices/kyrgyz-bride-price-controversy#:~:text=Kyrgyz%20Bride%20Price%20Controversy,turns%20women%20into%20a%20commodity.&text=The%20kalym%20is%20one%20of,for%20bringing%20up%20their%20daughter. [Accessed 2, April 2020].
- Raj and Trevon, (2008). *Is There Dowry Inflation in South Asia?*. Available from https://www.nber.org/papers/w13905 [Accessed 5, August 2019].

- Rees et al. (2016). *Association between Bride Price Obligations and Women's Anger, Symptom of Mental Distress, Poverty, Spouse and Family Conflict and Preoccupations with Injustice in Conflict-affected Timor-leste*. Available from https://gh.bmj.com/content/bmjgh/1/1/e000025.full.pdf [Accessed 29, April 2020].
- Ryan M. and Ursula C. (2017). *Gender Norms in Flux*: *Bride Kidnapping and Women's Civic Participation in the Kyrgyz Republic*. Available from https://openknowledge.worldbank.org/bitstream/handle/10986/28989/121927.pdf?sequence=4 [Accessed 25, March 2020].
- Sara L. and Nathan N. (2018). *Bride Price and the Wellbeing of Women*. Available from https://www.semanticscholar.org/paper/Bride-price-and-the-wellbeing-of-women-Lowes-Nunn/0e2ecb509ea90bd5ef17bd25fe2d03d1ea3f598b [Accessed 9, July 2019].
- Saskia V. (2018). *Marriage-Decision Making : A Family Affair*. Available from https://oxfamilibrary.openrepository.com/bitstream/handle/10546/620535/rr-marriage-family-affair-social-norms-210618-en.pdf?sequence=2&isAllowed=y [Accessed 29, July, 2019].
- Salimjonova L. and Kleinbach R. (2007). *Kyz Ala Kachuu and Adat: Non-consensual bride kidnapping and tradition in Kyrgyzstan.* Available from https://www.tandfonline.com/doi/abs/10.1080/02634930701517466?mobileUi=0&journalCode=ccas20 [Accessed 21, June 2020].
- Skoch I. (2010). *For Many Kyrgyz Women, Marriage Means Getting Kidnapped 'Borat-Style'*. Available from https://www.minnpost.com/global-post/2010/10/many-kyrgyz-women-marriage-means-getting-kidnapped-borat-style/ [Accessed 2, June].
- Surajit D. (2015). *Gender Roles in Family Decision Making: Results from Indian States*. Available from https://www.gtap.agecon.purdue.edu/resources/download/7401.pdf [Accessed 4, March 2020].
- Siwan A, (2007). *The Economics of Dowry and Brideprice.* Available from https://economics.ubc.ca/files/2013/05/pdf_paper_siwan-anderson-economics-dowry-brideprice.pdf [Accessed 2, August 2019].
- Siwan et al. (2018). *Towards Gender Equity in Development*. Available from https://www.oxfordscholarship.com/view/10.1093/oso/9780198829591.001.0001/oso-9780198829591-chapter-6 [Accessed 22, March 2020].
- Tendei M. and Sambulo N. (2010*). Implications And Complications of Bride Price Payment Among the Shona And Ndebele of Zimbabwe*. Available from http://www.aessweb.com/pdf-files/472-481.pdf [Accessed 5, July 2019].
- Tilakaev et al. (2016). *Sheep Meat Production Value Chains in the Kyrgyz Republic and Export Capacity to the EAEU Member States.* Available from https://www.researchgate.net/publication/315797872_Sheep_Meat_Production_Value_Chains_in_the_Kyrgyz_Republic_and_Export_Capacity_to_the_EAEU_Member_States [Accessed 11 February, 2020].
- UNDP. *Gender Equality in Kyrgyz Republic*. Available from https://www.kg.undp.org/content/kyrgyzstan/en/home/ourwork/democraticgovernance/gender-equality.html [Accessed 14, March 2020].
- Uthman et al. (2009). *Factors Associated with Attitudes towards Intimate Partner Violence Against Women: A Comparative Analysis of 17 Sub-Saharan Countries*. Available from https://bmcinthealthhumrights.biomedcentral.com/articles/10.1186/1472-698X-9-14 [Accessed 14, March 2020].
- UNICEF (2018). *UN Statement on Bride Kidnapping and Child Marriage*. Available from https://www.unicef.org/kyrgyzstan/press-releases/un-statement-bride-kidnapping-and-child-marriage [Accessed 2, April 2020].

- VOA (2019). *Kyrgyzstan Women Fight to End Bride Kidnapping*. Available from https://www.voanews.com/south-central-asia/kyrgyzstan-women-fight-end-bride-kidnapping [Accessed 18, March 2020].
- Wendo Ch. (2004). *African Women Denounce Bride Price*. Available from https://www.researchgate.net/publication/256943466_African_women_denounce_bride_price [Accessed 9, May 2020].
- Wolrd Development Report (2012). *Gender Equality and Development*. Available from https://openknowledge.worldbank.org/handle/10986/4391#:~:text=The%20main%20message%20of%20this,development%20outcomes%20and%20policy%20making.&text=Second%2C%20closing%20gender%20gaps%20in,opportunities%2C%20earnings%2C%20and%20productivity. [Accessed 20, August 2019].