Money and Marriage:

The Practice of Dowry and Brideprice in Rural India

Afra Rahman Chowdhury
Brown University

Abstract: One important aspect characterizing marriages in India is the financial transfer made at the time of marriage between families involved. These transfers can go in both directions – from the bride's family to the groom's, known as dowry, and vice versa, known as brideprice. While previous research has focused on dowry and brideprice separately, the possibility of a joint determination has been ignored. In this paper, I analyze dowry and brideprice as interdependent institutions, using retrospective data from the Rural Economic and Demographic Survey 1998, a nationally representative survey of rural India. I use logistic, ordinary least square and seemingly unrelated regression models to provide a complete picture of the prevalence, diffusion and inflation of dowry and brideprice in India from 1975 to 1999, while determining the factors affecting the size of economic exchanges between families. The key finding is that the practice of dowry has expanded over time at both the country and the regional levels. However, contrary to popular belief and some research findings, the real value of dowry and brideprice has declined over time. Education and age of bride and groom, groom's parental landholding, distance of marriage migration and the ratio of female to male at marriageable age are, in general, the important factors affecting the size of dowry. One very interesting finding is the positive association between bride's education and dowry when the opposite is expected. The explanation is that for an educated bride, dowry is paid more as a bequest than as a price to attract better grooms. Findings in this paper expand our knowledge of the dynamics and key determinants of marriage transactions in India, contributing to the broader agenda of improving our understanding of an important social institution that is too often responsible for violating basic human rights.

1. Introduction

Marriages in the Indian sub-continent are characterized by, among other things, transfers made at the time of marriage between families involved. These transfers of money or goods can go in both directions – from the bride's family to the groom's or vice versa. The former is known as dowry, while the latter is known as brideprice. Although brideprice is a common practice in many parts of Africa, dowry is the dominant form of marriage transaction in the Indian sub-continent (Billig 1992; Upadhya 1990; Paul 1986; Caplan 1984; Caldwell et al. 1983) and has drawn extensive attention from social science researchers.

There is a sizable literature on the expansion and inflation of dowry in India. I use the term 'expansion' to refer to the incidence of dowry practice becoming more prevalent in society over time. I use the term 'inflation' to refer to the increase in the size of dowry over time. Empirical studies on dowry expansion are mostly ethnographic. Thus, it is not clear whether the expansion of dowry is restricted within specific castes and communities or applicable throughout India. On the other hand, based on anthropological research, it is argued that the practice of brideprice has shrunk over time. It is difficult to draw conclusions about these trends at the country level without empirical evidence from large-scale survey data. Empirical evidence on dowry inflation is mixed. Epstein (1973), Srinivas (1984), Paul (1985), Upadhya (1990) and Billig (1992) argued in favor of dowry inflation. However, their studies were based on very small non-random samples. Examining village-level data representative of South (central) India, Rao (1993a) and Anderson (2003) found evidence in favor of dowry inflation. Edlund (2000) and Dalmia (2004), Arunachalam and Logan (2008) among others, did not find any evidence in favor of dowry inflation.

In this paper, I explore the prevalence, expansion and inflation of dowry and brideprice in India between 1975 and 1999 using a large-scale survey data representative of rural India. I provide empirical evidence that there has been an expansion of dowry practice over time in India. Prevalence of dowry, as defined by the proportion of marriages paying any dowry, has gone up in the same period when the size of dowry was going down. However, there has not been any significant change in the prevalence of brideprice. One interesting finding about the prevalence of dowry and brideprice is that both the practices have expanded over time among the lower caste population. I also find no evidence of dowry increase over time. In fact the real size of dowry is found to have declined between 1975 and 1999. The real value of brideprice has also declined in the sample period.

In addition to examining the expansion and prevalence of marriage transactions, I also examine the determinants of dowry and brideprice. The literature on marriage transactions in India has

disproportionately concentrated on dowry, most likely because dowry is more prevalent than brideprice. Much of this literature has tried to explain the role of dowry in the process of marriage to examine the determinants of dowry. There are mainly two opposing views – in one, dowry is paid as a pre-mortem bequest to daughters who may not be legally or culturally capable of inheriting parental property (Tambiah 1973, Zhang and Chan 1999, Botticini and Siow 2002). In the other, the price model, dowry is viewed as a pecuniary transfer to attract better match (Becker 1991, Rao 1993a, Anderson 2003). Most of the theories of dowry existence or inflation can be posited under these two motives of dowry payments. What factors affect dowry can critically depend on what the role of dowry is in the process of marriage negotiations. However, researchers do not agree on the underlying motives of dowry. This paper does not attempt to analyze the motives of financial transaction in the process of marriage, which by itself is a significant research effort. Rather, I analyze the determinants of dowry and explain them as evidence of either the bequest or the price theory. Arunachalam and Logan (2006) have argued in a recent paper that both motives can actually co-exist in the same society for different groups of people.

Finally, most of the empirical works have treated dowry either as a one-sided or a net transaction from the bride's family to that of the groom. Dowry, viewed as a unidirectional flow of cash or kind from the bride's family to the groom, ignores the fact that brideprice can be paid at the same time for the same marriage. Although some researchers use net-dowry, dowry net of brideprice, as a measure of marriage transaction (e.g., Rao 1993a 1993b, Dalmia 2004), they implicitly view the two processes as one. In this paper, I analyze dowry and brideprice not only as independent institutions but also as interdependent practices while determining the factors affecting economic exchanges between families. This allows for examining the complete picture of marriage transactions, as one is likely to affect the other.

The rest of the paper is organized as follows. The following section briefly outlines the socio-cultural and historical background of marriage and dowry practices in India along with parental motives behind the practice of marriage transaction. Data and sample are discussed and section 3 and empirical estimation methods are explained in section 4. Changes in prevalence and magnitude of dowry and brideprice over time is depicted in section 5. The factors that affect the two types of transfer are analyzed in section 6. Finally, I finish the paper with a conclusion in section 7.

2. Socio-cultural Background

2.1. Social and Religious Context of Marriage

In order to understand the institution of dowry and brideprice in context of India, first we need to explore the complex pattern, practice, and cultural norms surrounding marriage. Marriage is one of the most important events in the life course of Indian men and women, marking the transition to adulthood. It is considered as a sacramental union in the Hindu faith and is almost universal both for men and women in all over India. According to Hindu faith "One is incomplete and considered unholy if they do not marry" (Prakasa, pg. 14, 1982). Using 1981 census data, Rao (1993b) reports that 99% of men are married by the age of 25 and for women this proportion is achieved by the age of 20 in South-Central India. Traditionally, early marriage for girls is supported by social and cultural factors though there has been slow but persistent rise in age at marriage since 1928 after the passing of Child Marriage Restraint Act. The legal age for marriage is 18 for females and 21 for males. According to Census 2001, the mean age at marriage for women and men are 18.3 and 22.6 years with high regional variation.

The ideal age of marriage, be it early or late, is typically decided by the parents, especially in rural areas. Parents not only decide the age at which to get married, but also choose the appropriate partner and arrange the marriage for their sons and/or daughters. Finding a perfect partner of desirable social, economic and caste status can be a challenging task. People use social networks or matchmaker to locate potential bride or groom of appropriate match based on their socio-economic and most importantly caste background. Indian society is stratified by the *jati* or caste system and there are almost no cross-caste marriages in rural areas (Reddy and Rajanna 1984; Driver 1984; Bradford 1985; Deolalikar and Rao 1998). Because the matchings are done by the parents, family traits rather than individual traits are more likely to be given more importance. "Marriage is treated as an alliance between two families rather than a union between two individuals" (Prakasa, pg-15, 1982). One reason behind the importance of family background could be that generally in all regions, sons are responsible to take care of old-age parents and patrilocal co-residence is common. On the other hand, a daughter usually moves out from her paternal household and becomes a part of her husband's family where she co-resides with her husband and his family and helps her husband to look after his family.

2.2. Historical Background and Significance of Marriage Transaction

Exchanging goods and services on the occasion of marriage is one of the prime characteristics of traditional Indian marriages. In the past, in most of the societies of south India the direction of transfer was from the groom and his family to the bride and her family. This custom of paying brideprice was widely practiced even among high caste Brahmins (Srinivas, 1989). On the other hand, in north India, dowry, rather than bride-price, is always the custom practiced in connection to marriage. This regional divide in the practice of marriage transaction is widely recognized by social scientists (Miller 1981; Kolenda 1987). In dominant Hindu religion, according to the holy text "The Laws of Manu", one of the ten paths to reach *moksha* or enlightenment in Hinduism is *kanyadana*, the act of giving a virgin bride to the groom along with financial and/or other gifts that is known as *dakhshina* or dowry. Over time in India, dowry became a serious social problem when grooms and their families started to demand certain amount of dowry at the time of marriage negotiation. The practice of dowry changed from its voluntary root to a mandatory one for bride's family. Srinivas (1996) made a sharp distinction between modern dowry and the traditional respected custom though this distinction is absent in empirical dowry studies due to lack of data availability.

In addition to the change in the meaning of dowry, the ownership rights have also changed as groom's family, rather than the bride, enjoys the rights over the payments (Paul 1986). The overall situation exacerbated as bride's family with wealth started to offer high amount of dowry to attract better quality groom. As a result, poor families are also obliged to pay higher dowries to marry off their daughters. It is difficult to pinpoint the time when these transitions have actually begun due to lack of systematic research on this topic. It is claimed by anthropologists that the change occurred in the middle of nineteenth century. Around this time the lower caste also adopted the practice of dowry instead of brideprice (Alexander 1968; Den Uyl, 1995).

Due to the potential adverse effects of modern dowry on brides, their families and society at large, receiving or paying dowry has been made illegal since 1961 under Indian Civil Law. But this act provided very little support to control the epidemic of dowry prevalence. In recent period, average dowry can amount to over two-third of a household's asset or to about six times a household's annual income (Rao 1993a). This disproportionate amount of dowry can bring severe impoverishment and debt to bridal family especially if there are more daughters than sons. As a result, unmarried young daughters can be viewed as burden in the family and are likely to face sex-based negligence in parental household.

Dowry not only brings destitution to the bride's family, it can shape the destiny of a bride's post-marital life too[1]. The status of a bride in her husband's family typically depends on the amount of dowry she brings along with her at the time of marriage. A bride, whose family fulfills the dowry demand at the time of marriage, usually enjoys better status in her husband's family and better treatment from her in-laws. Consequences faced by the bride if dowry demands are not met include mental and physical abuse of young wives, ill-treatment and neglect. Suicide of the bride as a reaction to dowry related abuse and accidental burning of the bride is also common. This so-called 'accidental death' of a bride by burning is commonly termed as "bride-burning". According to the National Crime Bureau of the Government of India there are approximately 6,000 dowry deaths every year. According to Menski (1998), this number would be 25,000 considering both dowry deaths and other dowry related violence. Another study has shown that in Mumbai one quarter of deaths among females of age 15 to 30 years are linked with dowry violence (Karlekar, 1985). Whether dowry or brideprice is good or bad is not the question we are seeking to answer in this paper, but the potential outcome of dowry practice is worth mentioning.

2.3. Parental Motives Behind the Practice of Dowry and Brideprice

In order to understand the existence, prevalence and change in marriage transactions in India it is important to know what motivates parents to pay dowry or brideprice. It is difficult to obtain information on parental motives due to restrictions in data. Surveys that provide the amount of dowry paid do not provide information about either internal motive of parents who either make or receive the payment or ownership status of dowry. Asking questions about motives directly will not secure a reliable data as demanding dowry is illegal in India.

There could be two not mutually exclusive reasons for a bride's family to pay dowry. Firstly, dowry could be voluntary – to provide bequest to the daughter so that she can enjoy a better status in the house of her in-laws, where she moves after her marriage. This type of bequest also acts as a pre-mortem inheritance for daughters who do not have equal legal rights on her father's property as her brother. Dowry as bequest may not be associated with negative social outcomes, especially when daughter's legal inheritance rights are restricted. Secondly, dowry can be paid to meet the demand of the groom or to attract better quality groom. This is the type of dowry that can create substantial negative outcome in the society. If dowry actually serves as bequest to the daughter, then groom's

---

[1] For examples, see Bloch and Rao, 2002; Kumari, 1989; Menski, 1998

characteristics such as age, education or landholding should not matter in determining the dowry. But both groom's and bride's characteristics would play a vital role if dowry is paid to attract better quality groom or if it is demanded by groom's family. If the groom possesses better qualities, his family will demand more as dowry. Therefore, dowry will increase with his level of education and parental landholding and will be lower for older grooms. Similarly, dowry will also vary by the quality of the bride. Since we do not have information about whether the dowry was demanded or not at the time of marriage, it is difficult to distinguish these two types of transfer. Using a parametric model, Anderson (2000, 2002) investigated whether dowry is a bequest or competition for better groom in Pakistan. Using data from Bangladesh, Arunachalam and Logan (2006) also tried to answer the same question.

We can think of the same two reasons for the groom's family to pay brideprice. Firstly, brideprice can be paid voluntarily as a symbol of status. Providing bequest is not applicable in this case since it is against the culture for the groom to move to live with his in-laws after the marriage. Secondly, brideprice can be paid either to attract better quality bride or it can be demanded by bride's family. But brideprice is less likely to be demanded by bride's family as sons are valued more in the Indian traditional society and grooms' families always have the upper hand in marriage negotiations especially among Hindus in rural areas. If brideprice is paid to attract better quality bride then we will find significant effect of bridal quality in determining the value of brideprice. If brideprice is paid as a symbol of status, we may not find any significant variation by either bride or groom's quality on the value of brideprice.

There are some characteristics of the bride and groom that are more desirable in the marriage market. In general, if the groom is associated with those desirable characteristics, the bride's family will be willing to pay more in order to marry off their daughter to that groom. Similarly, if the bride is more desirable in the marriage market then the bride's family may not need to pay a higher amount of dowry to marry off their daughter. Thus, there are important characteristics or qualities of the bride and the groom that plays crucial role in determining the amount of marriage transaction that is paid either in cash or kind from one family to the other.

3. Data and Sample

3.1. Data

I use data from the Rural Economic and Demographic Survey (REDS), a panel survey conducted by the National Council of Applied Economic Research (NCAER) since the early 1970s. The first round of REDS was conducted in 1971 and included complete village and household information from 4,527 households spread over 259 villages from 17 major states[2] of India. The sample is representative of the entire rural population of India though the middle and upper income households were slightly over-sampled. Second and third rounds of the survey took place in 1982 and 1999, respectively. All 1971 villages were surveyed in 1999 excluding the sample villages in Jammu and Kashmir[3], thus making a total of 242 villages. In this survey round, all surviving households from the 1982 survey living in these 242 villages were surveyed again, including all split-off households residing in the same villages as the original household. In addition, a small random sample of new households was also added. Because of household division and this new sample, number of households in the 1999 round increased to 7,474. I use data from the 1999 survey round for this dissertation.

The 1999 household survey provides detailed information on asset ownership, incomes, and financial transaction at the household level. It also provides information on individual characteristics of household members. The Indian census data of the years 1981, 1991 and 2001 are used for community level information such as sex ratio of marriageable men and women.

3.2. Sample

The sample for this study includes 2,154 Hindu marriages that were conducted within the time period 1975 to 1999. Muslims and others are different from Hindus on many observable and unobservable characteristics and dowry dynamics in Muslim marriages are expected to be very different from these of Hindu marriages. In the REDS data set, the religious background of eighty-nine percent of the households is Hinduism and unfortunately, there are not enough Muslims in our sample for any meaningful comparison. Most of the previous studies on dowry in India have also excluded Muslims.

For this paper, only household heads and their spouses are included in the sample. Marriage and dowry information were collected retrospectively from the head of the household. Respondents were asked how much they received or paid during marriage as dowry or brideprice. If the respondent is a male then the value of marriage transaction he received at the time of marriage from

---

[2] These 17 states are Andhra Pradesh, Bihar, Gujarat, Haryana, Himachal, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, West Bengal, Assam, Jammu and Kshmir.
[3] Jammu and Kashmir were excluded due to the political unrest prevailing in that area.

his in-laws is coded as dowry and the amount paid by him is coded as brideprice. For a female respondent, it is the opposite - amount paid by her family is coded as dowry and the value of marriage transaction received by her family is coded as brideprice. Demographic and economic Information on spouse's natal household at the time of marriage were also collected retrospectively at the same survey[4].

Retrospective data always has potential to be affected by recall bias. But as Deolalikar and Rao (1990) mentioned, marriage in India is one of the major events in a person's life, especially for women. Hinduism does not allow polygamy or informal unions and marriage is viewed as the most prominent way to enter adulthood for both men and women. Besides, marriage transaction represents a very large proportion of household income and asset, and is a factor that plays a very significant role in marriage negotiation and decision-making. So, it is less likely to be subject to recall bias.

Both dowry and brideprice are measured in rupees[5]. To adjust for inflation and to make dowries and brideprices comparable between years, I converted nominal values of dowry and brideprice into 1999 constant prices by using rural consumer price index.[6]

3.3. Key Characteristics of the Sample

Dowry is highly prevalent in the sample – a dowry was paid in ninety percent of the marriages. On average, each dowry is equivalent to 38,946 rupees. Unlike dowry, brideprice is much less practiced. Only nineteen percent of all marriages paid brideprice. The mean value of brideprice is also smaller than dowry, 28,626 rupees. Groom's average age at the time of marriage is 23.61 year, one year higher than the country average. For brides, this average age is 18.1 years, almost the same as the country average, which is 18.3 years (Census 2001). A little less than three quarter of the grooms and a little less than half of the brides have attended formal schooling for at least two years. The grooms in the sample come from slightly wealthier families with respect to landholdings compared to the brides. Table 1 provides the summary statistics for the sample population.

4. Empirical Model and Estimation

---

[4] It is not clear from REDS documentation, whether the respondent or his spouse provided the information on spouse's natal household.

[5] 1 Dollar = 40 Rupee (approximately) in 2008.

[6] Researchers have used different indices to convert nominal values of dowry and brideprice to real ones. Amin and Cain (1998) and Arunachalam and Logan (2006) used price of rice; Rao (1993a, 1993b) and Deolalikar and Rao (1990) used price of gold; and Dalmia (2004) used consumer price index. I used rural consumer price index because it usually includes prices of a collection of commodities that have significant use in everyday life in rural areas.

In this paper I am looking at three different outcomes: prevalence rate, likelihood of paying dowry or brideprice over time, and determining the individual and family traits of bride and groom that play important role in assessing the amount paid.

To estimate the prevalence rate of dowry and brideprice over time, I use logistic regression model. The following logistic regression models are used to predict the odds of paying a dowry in equation (1) and the odds of paying a brideprice in equation (2):

$$\Pr(d_i(i,j))/(1 - \Pr(d_i(i,j))) = \exp(\beta_0 + \beta_1 X_i + \beta_2 X_j + \beta_3 H_i + \beta_4 H_j + \beta_5 C_i(i,j) + \beta_6 M_i(i,j) + \beta_7$$

$$\Pr(\llbracket bp \rrbracket_i(i,j))/(1 - \Pr(\llbracket bp \rrbracket_i(i,j))) = \exp(\gamma_0 + \gamma_1 X_i + \gamma_2 X_j + \gamma_3 H_i + \gamma_4 H_j + \gamma_5 C_i(i,j) + \gamma_6 M$$

where $\Pr(d_{ij})$ is the probability of paying a dowry in the marriage between bride i and groom j and, $(1 - \Pr(d_{ij}))$ is the probability of not paying a dowry. Similarly, $\Pr(bp_{ij})$ is the probability of paying a brideprice to bride i's family by groom j and, $(1 - \Pr(bp_{ij}))$ is the probability of not paying a brideprice. Matrices X_i and X_j, contains individual characteristics like age and years of education of bride i and groom j respectively. Similarly, H_i and H_j contains household level variables like parental landholding and number of sisters of bride i and groom j, respectively. C_{ij} is a dummy variable which takes a value of one if bride i and groom j belong to high caste[7]. Distance of marriage migration for bride i when married to groom j is denoted by M_{ij}, year of marriage by Y_{ij} and District level sex-ratio by SR_{ij}. RD_{ij} includes two region dummy variables, one for the West and the other for the North. Finally, u_{ij} and v_{ij} are random errors. Coefficient of the year of marriage variable should be positive if the prevalence rate of dowry (brideprice) is expected to increase over time.

To determine the desirable characteristics, that are important in assessing the amount of marriage transaction from one family to the other, I use Ordinary Least Square (OLS) regression method. I use the same equations as (1) and (2), but use the amount of dowry and brideprice as dependent variables in (1) and (2), respectively.

In the sample population, twenty four percent of all marriages, for which I have dowry and brideprice information available, the financial transaction went in both directions simultaneously. Therefore, it is reasonable to assume that the amount paid by the groom's family is not independent of the amount paid by the bride's family. In other words, dowry and brideprice for a particular

---

[7] Note that ideally a dummy for bride's caste affiliation and a dummy or groom's caste affiliation should be included. However, there are no cross caste marriages in the sample. So, a single dummy for caste affiliation for both bride and groom suffices.

marriage is jointly determined. In this case, equation (1) and (2) may seem unrelated but there will be correlations between $u_{i,j}$ and $v_{i,j}$. This means that Cov $(u_{i,j}, v_{i,j}) \neq 0$. Estimated coefficients in (1) and (2) will still be unbiased and consistent, but will be inefficient.

To obtain efficient estimates, I use Zellner's seemingly unrelated regression model (SUR) to estimate equation (1) and (2) jointly. This provides efficient estimates through the use of generalized least-square estimation (Greene, 2000). If the equations are actually unrelated, then there is no payoff to generalized least-square estimation and it will be the same as ordinary least squares. However, there is no cost either in the econometric sense in using the SUR model when the equations are actually unrelated, i.e. Cov $(u_{i,j}, v_{i,j}) = 0$.

5. Prevalence and Magnitude of Dowry and Brideprice Over Time

Dowry is a very common practice in the sample population of rural India. The prevalence rate[8] of paying a dowry is more than ninety percent. The prevalence rate of dowry from 1975 to 1999 for all four regions and all over rural India is graphed in figure 1. The trend shows that dowry practice has become more widespread in this period in all the regions except the East. Dowry practice is almost universal in the Southern and Western region. Prevalence of dowry is the lowest in the East – last five years weighted average shows seventy-eight percent of marriages are associated with dowry, which is still very high. Brideprice is not as common as dowry in all over rural India and the practice is not influenced by time much (figure 2). The practice is universal in the South. In the East, brideprice is almost non-existent. According to last five years of marriage data in the sample, none of the marriages in the East were associated with brideprice. In the North, on average, twenty percent of the marriages paid brideprice. Due to lack of sufficient amount of data points, it is not possible to say anything confidently about the Western region, though the data shows all the marriages in the West (twenty-three in total) paid brideprice. Now, if we consider dowry and brideprice together, transfers flow from both directions in the South and West, though the magnitude can be unbalanced. In the North and the East, dowry is a more common practice.

Multi-variate logistic regression results (Table 2, 3) support the bi-variate graphical presentation of dowry and brideprice time trend. Over time, the odds of paying a dowry at marriage has increased and the change is statistically significant. But there has not been any statistically significant change in the practice of brideprice showing no support to the anthropological argument of decline in

---

[8] Prevalence Rate = (Total marriages with dowry / Total marriages)

brideprice practice. The time trend of predicted odds ratio of paying a dowry is graphed in figure 3. The odds of paying a dowry have inclined in all the regions, northern region exhibiting the most moderate incline. As mentioned before, time is not statistically significant in influencing the odds of paying a brideprice. The predicted odds ratio of paying a brideprice is graphed in figure 4.

The most consistent but somewhat surprising finding is that the vertical magnitude of dowry is declining significantly with time, despite the horizontal diffusion of the practice. This finding goes against a large body of literature arguing about the inflation of dowry in the Indian marriage market (Rao 1993a; Anderson, 2003; Edlund, 2001; Billig, 1992; Upadhya 1990; Deolalikar and Rao 1990; Paul, 1985; Srinivas 1984; Lindenbaum, 1981; Epstein 1973)[9]. Though the absolute sizes of both dowry and brideprice have inflated over time, the real values, which are obtained by adjusting the absolute value by rural consumer price indices, have declined. This downward slope of the magnitude of both brideprice and dowry are valid irrespective of both bride and groom's educational status and groom's father's landholding. Except for the West, the real value of dowry has decreased in all the regions, the East exhibiting the steepest decline. The predicted values of both dowry and brideprice are obtained using SUR regression model. Due to shortage of enough data points in the Western region, it is difficult to say anything about the change of magnitude of either dowry or brideprice over time in that region. The brideprice, which is much smaller in size compared to dowry, has also declined in the North and South and increased in the East. The predicted dowry and brideprice over time for all four regions and the whole country are graphed in figure 5 and 6.

There exists a large and significant regional variation in the amount of dowry that is paid at marriage. The average amount of dowry is about 14,000 rupees higher in Western region compared to the average amount paid in Southern and Eastern region after controlling for the individual, household and community level characteristics. However, in North India, it is about 18,000 rupees less than the average dowry of Southern and Eastern region. If we look at the bi-variate mean and median table (Table 4) of dowry by region, we can see huge variation in the amount paid as dowry at marriage by region. Average dowry is more than six times higher in the West (116,284.1 rupees) than that of the North with an average dowry of 19,009.68 rupees. The median dowry is much lower than the average in all regions, meaning a small group of people pays a very high amount of dowry driving the average upward. Similar result was found by Dalmia, 2004. Regional variation is also

---

[9] For articles arguing for decline in real dowry, see Dalmia, 2004. The difference between dowry and groomprice is that dowry is the groomprice net of brideprice. It is still possible for dowry to inflate despite the decline of groomprice only if brideprice declines at a much higher rate than groomprice. In this paper, I don't differentiate between dowry and groomprice.

present in the case of brideprice (Table 5), but with a different pattern. Like dowry, average brideprice is also the highest in the West (103,284.4 rupees). The East has the lowest average brideprice, which is 281.52 rupees. In the East and the North, median brideprice is zero suggesting paying a brideprice is not a common practice in those regions. In the West and South, average brideprice is also much higher than the median amount. The mean brideprice is also very low compared to dowry in all four regions.

6. Factors Affecting Dowry and Brideprice

The result of the Zellner's SUR model is presented in table 6. As expected the error terms of the two regression models with outcome variables brideprice and dowry are significantly correlated at 0.2154 level of correlation. This suggests that the regressions are not totally independent of each other. In other words, the factors affecting the amount of dowry also affect the amount of brideprice.

6.1. Determinants of Dowry

Characteristics of bride and groom: The hypothesis with respect to bride's age is that dowry will increase with bride's age if there is a preference for younger brides. Marriages are generally arranged by parents, especially in rural areas, and sons are responsible for taking care of their elderly parents. To ensure old-age support, groom's parents might prefer a bride for their son who will conform to this expectation and are likely to be more controllable. Younger brides are comparatively more vulnerable and easily malleable. Therefore, younger brides could be more attractive in the marriage market. To compete with younger brides, parents of older brides might have to pay more as dowry. The regression result supports the hypothesis. Parents of older brides pay a larger amount of dowry. The value of dowry increases by 1,292 rupees for each year increase in bride's age. Unlike the positive relation between bride's age and dowry, increase in groom's age negatively affects dowry, that is, bride's parent pay less if the groom is older. Dowry reduces by 784 rupees for one additional year of groom's age suggesting that older grooms are less preferred in the marriage market. The average age at marriage for men in the sample is 23 years. Since marriage is almost universal for both men and women in India, men marrying late provide a negative signal about his ability, which can be financial, familial or personal. Therefore, older grooms fail to attract or be in a position to demand or attract larger dowry.

One surprising but not unusual result is that bride's level of education has a positive relation with the amount paid by the bride's family. For increase in each year of schooling, the value of dowry increases by 4,601 rupees. Other studies have also found similar results[10]. Education increases the ability to generate more income given the availability of formal sector job opportunities. Thus, educated brides should be more attractive in the marriage market. But, lack of formal employment opportunities that requires schooling in rural areas or the prevailing cultural norm against women generating income can hinder the demand for educated brides. Besides, educated women are usually better empowered having their own opinions and ideas, which might contradict with groom's parents' interests. Since groom's parents depend on their son for old-age support, a daughter-in-law with the possibility of not being supportive can jeopardize their future well-being. Thus, even though educated brides are better in quality, groom's parents may not find them attractive for their son. In that case, dowry will not be lower for educated brides as expected.

To assess the effect of bride's level of education, I have divided the brides into two groups by their education status. The mean value of dowry for the educated brides (55,027 rupees) is almost three fold of the dowry of the uneducated brides (18,792 rupees) (Table 7). This clearly indicates that these two groups might be very distinct and face different marriage market choices. Thus, to further analyze the effects of bride's level of education on dowry, I have run additional OLS regressions for each of these two groups of women with the amount of dowry as the dependent variable.

The estimates of the OLS dowry regression models for the two education groups of brides are presented in table 8 – model A includes only the uneducated brides and model B includes only the brides who have at least 2 years of schooling. The results show that for these two groups of women, underlying mechanisms to determine the value of dowry are different. For the educated group (model B), each year of schooling of the bride significantly increases the level of dowry. After controlling for other individual, household and community level variables, I found that for each year increase on schooling, dowry increases by 6,732 rupees. The level of education is the only bridal characteristic that matters in determining dowry for those educated brides. Neither the bride or the groom's age or even the groom's level of education does not have any significant effect. This indicates that for educated brides, dowry could be a bequest from their parents. Parents who are likely to provide bequest for their daughters are also more likely to educate their daughters. Again, bride's education could be an imperfect proxy of wealth, which is not completely captured by

---

[10] For example, see Dasgupta and Mukherjee 2003.

landholding. In that case, we can say that wealthier parents are more likely to provide dowry as bequest. Unlike the educated brides, for the uneducated group (model A), bride's age significantly increases dowry. Dowry is negatively related with groom's age but the relation is positive with groom's education, suggesting uneducated bride's parents pay less if the groom is older but they pay more for educated grooms. Thus, for uneducated brides, dowry is less likely to be bequest, rather it is paid either to attract better quality grooms or because dowry is demanded by the groom's family as a condition of marriage.

An educated groom is more attractive in the marriage market compared to his uneducated counterpart for his higher level of social standing and accumulation of social capital. He has more options for living open to him and is more likely to be employed in the formal sector with a regular income flow, not to mention other unobservable benefits that education provides. So, on the one hand, a bride's family will be willing to pay higher dowry to marry off their daughter to an educated groom, and on the other hand, groom's family will have more bargaining power to demand higher dowry. This hypothesis is supported by the SUR model results in table 6. Grooms level of education positively inflates dowry as expected. For one additional year of schooling dowry rises by 1,233 rupees.

To unfold how groom's education might affect dowry, I have also divided the grooms into two groups based on their education status. Table 7 presents the mean and median dowry for these two different groups as well as for all marriages. Like educated brides, educated grooms also pay about three times more dowry compared to their uneducated counterpart displaying clear distinction between these two groups. I ran separate OLS dowry regressions to identify which characteristics of bride and groom are associated with higher dowry for these two different sets of grooms. The results of the regressions are shown in table 9. Model A includes only uneducated grooms and model B includes only the educated grooms.

For the educated grooms, both the bride's and groom's attributes play significant role in determining the value of dowry. Dowry increases both with bride's age and level of education. For each additional year of age and schooling of the bride, dowry increases by 1,368 and 4,577 rupees respectively. For educated grooms, dowry is also determined by their age and level of education. Dowry increases with groom's years of education but declines with age. For an additional year of schooling the amount paid by the bride's family increases by 1,235 rupees and an additional year of age reduces dowry by 859 rupees. Unlike their educated counterpart, for uneducated grooms none of the individual characteristics of the bride or the groom has any significant effect on the

determination of dowry. Thus, for this group, dowry does not significantly vary by personal attributes of its agents. These findings indicate the existence of multiple marriage markets and interesting implication of dowry and its nature.

Bride's parents pay more dowry either to attract educated, young grooms, whom I am referring to as 'high quality grooms' or they pay more for educated grooms because the high quality grooms have higher bargaining power to demand more dowry. As there is a positive association between bride and groom's level of education[11] and dowry increases with bride's education level, high dowry can be a result of both parental bequest and a method to attract better quality groom or meeting the demand of the groom's family.

Household and matching characteristics: The household variables that are included in the SUR model presented in table 6 are landholding of bride's parents at the time of marriage, landholding of groom's parents at the time of marriage, number of sisters the bride has, distance of marriage migration, caste affiliation, and year of marriage.

In rural areas, where agriculture is the main occupation, land represents wealth. Wealthier families may pay larger amount of dowry to attract better quality grooms or even to maintain family status. If dowry is viewed as bequest then the size of dowry is more likely to increase with bride's parental wealth, which is measured here by acres of land. A wealthy groom is a better groom. On the one hand, a better groom has higher bargaining power to demand larger dowry; and on the other hand, bride's family is more likely to pay a higher dowry to marry off their daughter to a better groom. As a result, grooms with parental landholding will be associated with higher dowry. Interestingly, the result of the SUR model in table 6 shows insignificant relation between dowry and parental landholding of the bride at the time of marriage, suggesting dowry is not a wealth affect from the bride's side of the family in contrast to the argument made by Edlund (1997). Given these findings, it can be argued that, in general, dowry is not a bequest from the bride's parental point of view. This leaves us with two options – either dowry is demanded by the groom's family or it was paid to attract better quality groom. I found positive association of dowry with groom's parental landholding although the magnitude is not very high. The significance of groom's parental landholding is consistent with the above mentioned two possible scenarios: first, either dowry is demanded as grooms with land might have higher bargaining power in the marriage negotiation process; and second, grooms with land are considered as better quality grooms compared to the

---

[11] See table10 for bride and groom's positive association by education status.

landless ones and thus brides' parents are willing to pay more dowry to attract these grooms. To investigate the effect of groom's parental landholding in detail, I ran two separate OLS dowry regressions (table 12) – one only including the grooms from landless families (model A) and the other only including grooms from families with landholding (model B). The mean and median levels of dowry for the landless and landed grooms are presented in table 11.

Considering grooms with land, results from the OLS dowry regression (table 12 model B) show significant effect of the attributes of bride and groom in determining the value of dowry. Bride's age at marriage, years of schooling and groom's years of schooling have positive effect on dowry. Not surprisingly, increase in groom's age at marriage reduces the value of dowry. Each additional acre of land raises the value of dowry by 5 rupees. For landless grooms, dowry does not vary by individual attributes of the bride and groom except for the bride's level of education. Each year of schooling of the bride increases the dowry by about 4,505 rupees. Thus it can be argued that grooms with landholding are considered as high quality grooms and bride's family pay more either because of their intention to get a better groom or to meet the demand of groom's family. But this is not the case with landless grooms. As a result, the average dowry is lower for them.

It is argued in the literature that the number of sisters a bride reduces the amount of dowry. This could be either because of cash constraint or parents' desire to pay equal amount of dowry for each daughter (Botticini, 1999, Dalmia, 2004). Especially, if the dowry is paid as a bequest, there is no reason to believe that parents will discriminate among daughters and pay different amounts of dowry for different daughters. Even if they do, with fixed amount of resources, share of dowry will decrease with number of sisters the bride has. The statistical insignificance of the coefficient of the variable 'number of sisters the bride has' suggests that this variable does not have any significant affect on the amount of dowry. This could indicate that the dowry is paid as it is demanded from the groom's family who does not have any incentive to discriminate the brides by their number of sisters rather than being voluntary from bride's parents. Though insignificant, the consistent negative relation between dowry and bride's number of sisters in all the regression models, including the main and sub models, by bride's education status, and by groom's education or landholding status reveal that the larger the number of sisters the bride has, the lower the dowry is. Hence, even though dowry is demanded there could be elements of bride's parents' desire to pay dowry voluntarily for better future of their daughter.

There is a statistically significant positive effect of distance of marriage migration on the amount of dowry. This provides support for Rosenzweig and Starks' (1989) argument about marriage

migration and income diversification of the family. They argue that to marry off the daughter to a groom at a distant area, parents are willing to pay more to avail the opportunity to diversify their income risks through informal credit provided by their in-laws living in distant areas characterized by different income risks. If we think about the demand side, it also could be that the grooms from distant areas demand more dowry as a compensation for the risk of having less information about the bride. The relation between distance of marriage migration and dowry varies by the groom's educational and landholding attributes, making it more interesting. Unlike the uneducated grooms, for the educated ones, distance does not increase dowry. This exactly follows the Rosenzweig and Stark argument as educated grooms are already in a different income risk group who are not likely to be involved in farming. Thus, bride's parents do not need to look for grooms from a distant place for income risk diversification. Again, considering landholding, for grooms with parental landholding, distance of marriage migration increases dowry, but that is not the case with landless grooms. Rather, for landless grooms, distance reduces dowry though the relation is not statistically significant. It reveals that brides' parents prefer to marry off their daughters far only if that helps them to diversify income risk and that is possible if the groom has access to land. For landless grooms, dowry is more likely to decline with distance.

Finally, in India, the society is stratified by caste system and caste is positively related with the socio-economic position of a household. High caste dummy is included along with landholdings of both bride and groom's fathers to capture any additional effect of caste other than its wealth effect. Even though the magnitude of the coefficient is positive and big, it is not statistically significant, suggesting once controlling for other variables, caste does not have any significant effect on dowry.

Community level effect: One of the major explanations provided in the demographic literature to explain the existence of dowry is the excess supply of marriageable women than men in the marriage market which is generally referred to as 'marriage squeeze' (Caldwell at. el. 1983; Rao 1993a, 1993b; Bhat and Halli 1999; Billig 1992). The result of the analysis provides strong support for marriage squeeze argument. I found that dowry is significantly higher if there are more women at marriageable age in a district than the number of marriageable men in the same district.

6.2. Determinants of Brideprice

Characteristics of bride and groom: The only individual characteristic that has any significant effect on the amount paid as brideprice is bride's age at marriage. Brideprice is positively associated with bride's age at marriage, meaning groom's family pays a higher brideprice if the bride is older. In this sample of rural Indian marriage unions, the mean age at marriage for women is 18 years. By age 32, 99% of all women get married. There is no significant effect of either bride's education or parental landholding or even groom's education on brideprice. Groom's parental landholding has negative effect; suggesting groom with more parental landholding pays less brideprice. But this effect is marginally significant and the magnitude is very small.

Household and matching characteristics: The number of sisters that a groom has is positively and significantly related to brideprice. It is difficult to explain this relation even though the relation is persistent. Distance of marriage migration is not a significant variable that affects brideprice. Though caste is not significant either, interestingly it shows a negative relation. High caste groom pays less brideprice may be because they enjoy higher bargaining power obtained from their caste affiliation.

Community level effect: According to the marriage squeeze hypothesis, with high sex ratio of marriageable women and men (F/M), it is the dowry that is expected to be affected positively not brideprice. And as expected, the result does not display any significant effect of sex ratio on the amount paid as brideprice. But like dowry, we see significant regional variation in case of brideprice. Table 10 presents the mean and median value of brideprice for four different regions.

7. Conclusion

One of the key objectives of development research is to broaden our understanding on pressing social issues that threaten the welfare of individuals in a society. One such pressing issue is the marriage transaction in India. Marriage transaction is a burning topic in the Indian context because of its potential adverse effect on women and on union formation in general. Marriage transaction can be studied from a multidimensional perspective. This paper analyzes marriage transaction taking into account the financial transaction from both sides involved in the formation of a marital union. It examines the institution of dowry and brideprice, their prevalence in the community and factors that influence practices and their magnitudes. By doing that, it tries to demystify the characteristics

of bride and groom that are more valued in the marriage market by the other side. Thus, this paper provides a more comprehensive picture of Indian marriage transaction and fills up some of the gaps that exist in the literature.

One very important finding is that dowry practice has become more prevalent over time especially among the lower castes though the magnitude of dowry has declined at the same time. Over the course of time, the Indian government has taken a few steps including the Dowry Prohibition Act (1984) to eliminate the practice of dowry. The finding of horizontal expansion of dowry suggests the inadequateness of these policies. Lack of proper implementation of policies at the local community level can also be responsible for the ineffectiveness of the policies. Another striking finding is the association of larger dowry with higher education of brides, which has the potential to adversely affect female education. However, I explain that education does not reduce the desirability of a bride rather parents who educate their daughter are also more likely to voluntarily provide more dowry for her at marriage.

This analysis is not free from limitations. Empirical analysis of marriage transaction is very much likely to be affected by unobserved characteristics that are not included in the regression models. It is possible that some community level traits such as village norms can systematically affect the estimates that I have measured. Similarly there can be household level characteristics that are unobserved and can systematically determine not only who pays and who does not but also how households determine investments in female children or the like. Individual level traits such as beauty can affect the size of marriage transaction and timing of marriage at the same time. In this paper, I have ignored unobserved variables that might affect marriage transactions. However, this does not posit any problem in establishing association between various variables and marriage transactions.

At the macro level, there are three main indicators of dowry that showcase changes in the practice over time. These are expansion, inflation and burden of dowry on the household. According to Rao (1993a), an average dowry in India can amount to over two-thirds of a household's assets, or about six times a household's annual income. This is a huge burden on poor households and it is important to know whether this burden has worsened over time from a social welfare point of view. Since the size of dowry has declined over time, it is very likely that dowry has become less of a burden, on average, over time, given that households have not experienced a decline in real income over time. However, due to lack of data on household income at the time of

marriage, I could not determine the level of and change in the financial burden that households face in paying dowries. This remains as a limitation of this paper.

In conclusion, it is important to understand how certain institutions and processes work in order to design effective solution delivered to the society through social policies. Despite its limitations, this paper, I believe, sheds light on some of the uncertainties that existed in the literature. Therefore, it has taken an important step to further our knowledge on the dynamics of marriage transactions in India and some of its key factors. This paper thus contributes to the broader agenda of improving our understanding of an important social institution that is too often responsible for violating the basic human rights of a traditionally disadvantaged gender group and their families. It is this author's sincere hope that the evidences presented in this study not only enriches our knowledge about marriage transactions but also adds to the urgency of social policy actions required to address the issue.

Reference

Alexander, K. C. 1968. *Social Mobility in Kerala.* Deccan College, Poona.

Amin, Sajeda and M Cain. 1998. "The Rise of Dowry in Bangladesh," in *The Continuing Demographic Transition,* ed. By G. W. Jones, R. M. Douglas, J. C. Caldwell, and R. M. D'Souza. Oxford University Press.

Anderson, Siwan. 2003. "Why Dowry Payments Declined with Modernization in Europe but are Rising in India", *Journal of Political Economy,* Vol. 111, No. 2, p. 269-308.

Arunachalam, R. and T. Logan. 2006. "On Heterogeneity of Dowry Motives?" NBER Working Papers 12630, National Bureau of Economic Research, Inc.

Arunachalam, R. and T. Logan. 2008. "Is There Dowry Inflation in South Asia?" NBER Working Papers 1395, National Bureau of Economic Research, Inc.

Becker Gary S. 1991. *A Treatise on the Family,* Harvard University Press.

Bhat, P. N. Mari and Shiva S. Halli. "Demography of Brideprice and Dowry: Causes and Consequences of the Indian Marriage Squeeze", *Population Studies,* Vol. 53, No. 2. (July, 1999), p. 129-148.

Billig, M S. 1992. "The Marriage Squeeze and the Rise of Groomprice in India's Kerala State", *Journal of Comparative Family Studies,* Vol.23, No.2,

Bloch, F and V. Rao. 2002. "Terror as a bargaining instrument: A case study of dowry violence in rural India", *American Economic Review,* Vol. 92(4), P. 1029-1043.

Botticini, Maristella. 1999. "A loveless economy? Intergenerational altruism and marriage market in a Tuscan town, 1415-1436" *Journal of Economic History,* Vol. 59(1), p.104-21.

Bradford, N J. 1985. "From Bridewealth to Groom-fee: Transformed Marriage Customs and Socioeconomic Polarisation Amongst Lingayats", *Contributions to Indian Sociology (n.s.),* Vol.19, No.2, (369-302).

Caldwell, J C, P Reddy and P Caldwell. 1983. "The causes of marriage change in South India", *Population Studies,* Vol. 37, (343-361).

Census, 2001. Office of the Registrar General and Census Commissioner, India.

Caplan, L. 1984. "Bridegroom price in urban India: class, caste and 'dowry evil' among Christians in Madras" *Man (n.s.),* 19, p.216-233.

Dalmia, Sonia. 2004. "A hedonic analysis of marriage transactions in India: estimating determinants of dowries and demand for groom characteristics in marriage" *Research in Economics,* Vol. 58, p. 235-255.

Dasgupta, Indraneel and Mukherjee, Diganta, "'Arranged' Marriage, Dowry and Female Literacy in a Transitional Society" (August 2003). CREDIT Research Paper No. 03/12.

Deolalikar , Anil B. and Vijayendra Rao. 1990. "The demand for Dowries and Bride Characteristics in Marriage: Empirical Estimates for Rural South-Central India", in *Gender, Population and Development,* K Maithreyi, R Sudershan and A Shariff (eds), Oxford University Press, Oxford, p.122-140.

Driver, Edwin D. 1984. "Social Class and Marital Homogamy in Urban South India" *Journal of Comparative Family Studies* 15 (Summer 1984), (195-210).

Edlund, Lena. 2006. "The Price of Marriage: Net vs. Gross Flows and the South Indian Dowry Debate?" *The Journal of European Economic Association, papers and proceedings* Vol. 4, No. 2-3, April-May 2006, pp. 542-551.

Edlund, Lena. 2001. "Dear Son-Expensive Daughter: Why Do Scarce Women Pay to Marry?" Manuscript. New York: Columbia University, Dept. of Economics, 2001.

Edlund, Lena. 2000. "The marriage squeeze interpretation of dowry Inflation: A comment?" *Journal of Politial Economy,* Vol. 108, No. 6 (December, 2000), pp. 1327-1333.

Edlund, Lena. 1997. "Dowry to Daughters: Theory and Evidence?" Manuscript. New York: Columbia University, Dept. of Economics, 1997.

Epstein, T. Scarlett. 1973. *South India: Yesterday, Today and Tomorrow – Mysore Villages Revisited,* London: Macmillan.

Greene, William H. 2000. *Econometric Analysis,* Prentice-Hall, Inc.

Karlekar, Malavika. 1998. "Domestic Violence", *Economic and Politial Weekly,* Vol. 33, No. 27, July 1998, (1741-1751).

Kolenda, P. 1987. *Regional Differences in Family Structure in India.* Jaiur: Rawat Publications.

Kumari, R. 1989. *Brides are not for burning: Dowry victims in India.* Radiant Publishers, New Delhi.

Lindenbaum, Shirley. 1981. "Implications for Women of Changing Marriage Transactions in Bangladesh" *Studies Family Planning,* Vol. 12 (November 1981), pp. 394-401.

Menski, W. 1998. (ed.) *South Asians and the Dowry Problem,* Vistaar Publications, New Delhi.

Miller, B. D. 1981. *The Endangered Sex: Neglect of Female Children in Rural North India.* Ithaca: Cornell University Press.

Paul, Madan C. 1985. *Dowry and Position of Women in India: A Study of Delhi Metropolis.* New Delhi: Inter-India Pubs.

Prakasa, Rao. 1982. *Marriage, the Family and Women in India*, Printox: South Asia Books, 1982.

Rao, Vijayendra. 1993a. "The rising price of husbands: a hedonic analysis of dowry increases in rural India", *Journal of Politial Economy*, Vol. 101 (666-677).

Rao, Vijayendra. 1993b. "Dowry inflation in rural India: a statistical investigation", *Population Studies*, Vol. 47 (283-293).

Reddy, G. Sreenivas, and Rajanna, Ch. 1984. "Intercaste Marriage: A Study ", *Social Welfare*, Vol. 31, (April 1984), (10-12).

Rosenzweig, M R, O. Stark. 1989. „Consumption smoothing, migration and marriage: evidence from rural India" *Journal of Politial Economy*, Vol. 97, p.905-926.

Srinivas, M N. 1984. "Some Reflections on Dowry", New Delhi: Oxford University Press, 1984.

Tambiah, S J. 1973. "Dowry and Bridewealth and the Property Rights of Women in South Asia" in *Bridewealth and Dowry*, J Goody and S Tambiah (eds.) Cambridge University Press, Cambridge, (59-166).

Upadhya, C B. 1990. "Dowry and Women's Property in Coastal Andhra Pradesh", *Contributions to Indian Sociology (n.s.)*, Vol.24, No.1, p.29-59.

Zhang, J and W Chan. 1999. "Dowry and Wife's Welfare: A Theoretical and Empirical Analysis" *Journal of Politial Economy*, Vol. 107, No. 4 (786-808).

Table 1. Summary Statistics

Variable	Mean	Standard deviation
Groom's family paid brideprice	0.19	0.39
Bride's family paid dowry	0.89	0.31
Amount paid by groom's family, if paid (constant 1999 rupees)	28625.63	56344.94
Amount paid by bride's family, if paid (constant 1999 rupees)	38945.57	70295.48
Groom's age at marriage	23.61	6.25
Bride's age at marriage	18.1	4.48
Groom is literate	0.71	0.46
Bride is literate	0.46	0.50
Groom's schooling, if literate (year)	6.62	3.19
Bride's schooling, if literate (year)	5.61	2.65
Groom's father owns land	0.76	0.43
Bride's father owns land	0.70	0.46
Groom's father's landholding at the time of marriage (acre)	934.57	1208.16
Bride's father's landholding at the time of marriage (acre)	773.70	1063.58
Year of marriage	1984.54	6.14
Distance of marriage migration (km)	29.58	62.77
High caste	0.34	
Middle caste	0.22	
Low caste	0.44	
Region: East	0.11	
West	0.14	
North	0.42	
South	0.29	
N	2154	

Table 2. Odds ratios of paying dowry at marriage

Variables	Odds Ratio	Std. Err.
Amount Paid by Bride's Family (Dowry)		
Matching bride & groom characteristics		
Bride's age at marriage	.969	.025
Groom's age at marriage	.993	.019
Bride's year of schooling	1.134**	.048
Groom's year of schooling	.998	.028
Matching household characteristics		
Bride's parental landholding at marriage	.999	.0001
Groom's parental landholding at marriage	1.0002+	.0001
Distance of marriage migration	1.0004	.001
High caste	.439***	.077
Year of marriage	1.034*	.0151
Community level variables		
District marriageable sex ratio (F/M)	1.059***	.009
Region: North	1.728*	.436
East	.55*	.147
West	10.42**	8.08
Total	2116	

*** p<.0001, ** p<.01, *<.05, + p<.06

Table 3. Odds ratios of paying brideprice at marriage

Variables	Odds Ratio	Std. Err.
Amount Paid by Groom's Family (Brideprice)		
Matching bride & groom characteristics		
Bride's age at marriage	.934**	.024
Groom's age at marriage	1.057**	.02
Bride's year of schooling	1.065	.044
Groom's year of schooling	.902***	.025
Matching household characteristics		
Bride's parental landholding at marriage	1.000	.001
Groom's parental landholding at marriage	.999	.001
Distance of marriage migration	.999	.001
High caste	.519***	.085
Year of marriage	1.002	.013
Community level variables		
District marriageable sex ratio (F/M)	1.024**	.007
Region: North	.115***	.022
East	.016***	.009
Total	1329	

*** p<.0001, ** p<.01, *<.05

Table 4. Mean and median dowry by region

Region	N	Mean Dowry	Median Dowry
All	2181	35,481.36	12,636.42
East	333	32,687.32	10,556.88
West	121	116,284.1	73,831.01
North	1216	19,009.68	6,342.80
South	511	57,365.6	30,229

Note: All mean and median dowries are in Rupees

Table 5. Mean and median brideprice by region

Region	N	Mean Brideprice	Median Brideprice
All	1392	8,616.48	0
East	166	281.52	0
West	23	103,284.4	72,379.85
North	1009	4,031.45	0
South	194	28,371.824	17,507

Note: All mean and median brideprices are in Rupees

Table 6. Estimates of the Determinants of Marriage Transaction (Zellner's SUR Model)

Variables	Coeff.	Std. Err.
Amount Paid by Bride's Family (Dowry)		
Intercept	2430432	454494.9***
Matching bride & groom characteristics		
Bride's age at marriage	1292.483	447.5323**
Groom's age at marriage	-784.4532	340.2301*
Bride's year of schooling	4601.69	623.0918***
Groom's year of schooling	1233.037	455.953**
Matching household characteristics		
Bride's parental landholding at marriage	0.5954229	1.668388
Groom's parental landholding at marriage	5.606326	1.369541***
Bride's number of sisters	-1171.176	922.7494
Distance of marriage migration	41.22418	18.15453*
High caste	4251.404	2831.251
Year of marriage	-1259.255	227.9271***
Community level variables		
District marriageable sex ratio (F/M)	751.9925	119.4357***
Region: West	14460.12	2532.301***
North	-18064.56	3411.867***
Amount Paid by Groom's Family (Brideprice)		
Intercept	493009.5	186957.8**
Matching bride & groom characteristics		
Bride's age at marriage	279.5388	124.5748*
Bride's year of schooling	281.1567	255.9722
Groom's year of schooling	29.03158	187.4381
Matching household characteristics		
Bride's parental landholding at marriage	0.0853315	0.6837839
Groom's parental landholding at marriage	-1.017899	0.5613497
Groom's number of sisters	1424.591	346.9152***
Distance of marriage migration	3.311276	7.452305
High caste	-854.1352	1164.143
Year of marriage	-251.7558	93.77468**
Community level variables		
District marriageable sex ratio (F/M)	38.54448	49.03207
Region: West	14460.12	2532.301***
North	-2367.913	1320.841
Total	1291[12]	

Breusch-Pagan test of independence: chi2(1) = 99.914, Pr = 0.0000
Correlation matrix of residuals: Brideprice   Dowry

---

[12] The total number of cases in the sample is 2233. From those, 942 cases are not included in this regression because in those cases either dowry or brideprice or information on any other variable is missing.

Brideprice	1	
Dowry	0.2154	1

*** p<.0001, ** p<.01, *<.05, + p<.06

Table 7. Mean and median dowry by education level of bride and groom

	N	Mean Dowry (S.E.)	Median Dowry
All	2154	35,193.52 (1,467.52)	12,254.61
Educated bride	975	55,026.74 (2,769.20)	26,780.93
Uneducated bride	1179	18,792.00 (1,201.35)	7,002.801
Diff		36,234.74 (2,843.65)***	
Educated groom	1558	42,902.32 (1,952.15)	16,068.56
Uneducated groom	596	15,041.98 (1,073.22)	6,896.642
Diff		27,860.33 (3,225.70)***	

*Note: All mean and median dowries are in Rupees, *** p> |t| = 0.000*

Table 8. OLS estimates of the determinants of dowry by bride's education status

Variables	Model A (Uneducated brides)		Model B (Educated brides)	
	Coeff.	Std. Err.	Coeff.	Std. Err.
Intercept	1363163**	399678.6	3515591***	863558.2
Matching bride & groom characteristics				
Bride's age at marriage	961.478	369.382	1182.998	952.6444
Groom's age at marriage	-586.927	291.039*	-893.6386	699.7991
Bride's year of schooling			6732.275***	1258.549
Groom's year of schooling	1561.482***	386.879	747.5257	906.8653
Matching household characteristics				
Bride's parental landholding at marriage	-105334	1.511	1.539942	3.22093
Groom's parental landholding at marriage	10.019***	1.592	4.063249+	2.143489
Bride's number of sisters	-853.335	782.176	-2412.739	1920.422
Distance of marriage migration	27.109	15.509	61.93783	35.23518
High caste	1037.781	2527.11	7815.586	5316.38
Year of marriage	-689.314	200.288**	-1838.684	433.495***
Community level variables				
District marriageable sex ratio (F/M)	199.501+	107.999	1310.742***	219.4732
Region: West	58192.43***	7558.722	60600.22***	10511.26
North	-18803.28	2945.478***	-19210.22	6736.909**
N	1179		975	

R^2	0.179	0.195

*** $p<.0001$, ** $p<.01$, *$<.05$, + $p<.06$

Table 9. OLS estimates of the determinants of dowry by groom's education status

Variables	Model A (Uneducated grooms)		Model B (Educated grooms)	
	Coeff.	Std. Err.	Coeff.	Std. Err.
Intercept	1646899	362092.1***	2750107	610890***
Matching bride & groom characteristics				
Bride's age at marriage	654.529	371.757	1367.872*	603.27
Groom's age at marriage	-339.486	269.011	-859.46	474.325+
Bride's year of schooling	1616.253	1202.677	4576.716***	747.131
Groom's year of schooling			1234.936	666.958+
Matching household characteristics				
Bride's parental landholding at marriage	1.354	2.223	0.341	2.04
Groom's parental landholding at marriage	3.501	1.997	5.739**	1.647
Bride's number of sisters	-828.014	762.882	-1773.136	1264.322
Distance of marriage migration	32.443**	10.012	52.813	31.562
High caste	1181.509	2482.04	4552.821	3698.8
Year of marriage	-823.225	181.251***	-1429.125	306.568***
Community level variables				
District marriageable sex ratio (F/M)	34.445	103.905	925.363***	156.814
Region: West	10904.66	7229.341	64884.7***	7911.165
North	-16659.96	2542.288***	-18430.1	4752.375***
N	596		1558	
R^2	0.1461		0.2143	

*** $p<.0001$, ** $p<.01$, *$<.05$, + $p<.07$

Table 10. Assortative matching of bride and groom by education

Bride/Groom	0 yrs of schooling	2 or more yrs of schooling	Total
0 yrs of schooling	793	804	1597
	49.66	50.34	100
	93.08	38.58	54.39
2 or more yrs of schooling	59	1280	1339
	4.41	95.59	100
	6.92	61.42	46
	852	2084	2936
Total	29.02	70.98	100
	100	100	100

Pearson chi2(1) = 723.9833 Pr = 0.000

Table 11. Mean and median dowry by landholding status of groom's parents

	N	Mean dowry (S.E)	Median dowry
All	2154	35,193.52 (1,467.52)	12,254.61
Grooms with parental landholding	1648	38,643.81 (1,812.19)	14,020.35
Grooms with landless parents	506	23,956.2 0(1,968.69)	10,080.34
Diff		14,687.60 (3447.89)***	

Note: All mean and median dowry are in Rupees, *** p> |t| = 0.000

Table 12. OLS estimates of the determinants of dowry by groom's parental landholding status

	Model A (Landless grooms)		Model B (Grooms with land)	
Variables	Co-eff	Std. Err.	Co-eff	Std. Err.
Intercept			2780024***	560164.4
Matching bride & groom characteristics				
Bride's age at marriage	790.349	708.231	1318.832*	546.819
Groom's age at marriage	835.763	590.598	-1052.847	413.692*
Bride's year of schooling	4504.92***	980.908	4597.941***	751.717
Groom's year of schooling	868.69	715.42	1150.66*	547.894
Matching household characteristics				
Bride's parental landholding at marriage	-0.411	5.55	0.112	1.862
Groom's parental landholding at marriage			5.219**	1.54
Bride's number of sisters	-803.963	1481.932	-1399.581	1130.958
Distance of marriage migration	-11.668	36.827	45.818*	20.773
High caste	-561.224	4457.449	4754.301	3422.419
Year of marriage	-726.49	326.168*	-1433.21	281.110***
Community level variables				
District marriageable sex ratio (F/M)	487.148*	193.267	802.991***	142.188
Region: West	22696.05*	9923.054	66421.26***	7543.088
North	-931.056	4711.79	-22899.36	4286.32***
N	506		1648	
R²	0.1597		0.2433	

*** p<.0001, ** p<.01, *<.05, + p<.07

Figure 1: Regional Prevalence of Dowry Over Time[13]

Figure 2: Regional Prevalence of Brideprice Over Time

---
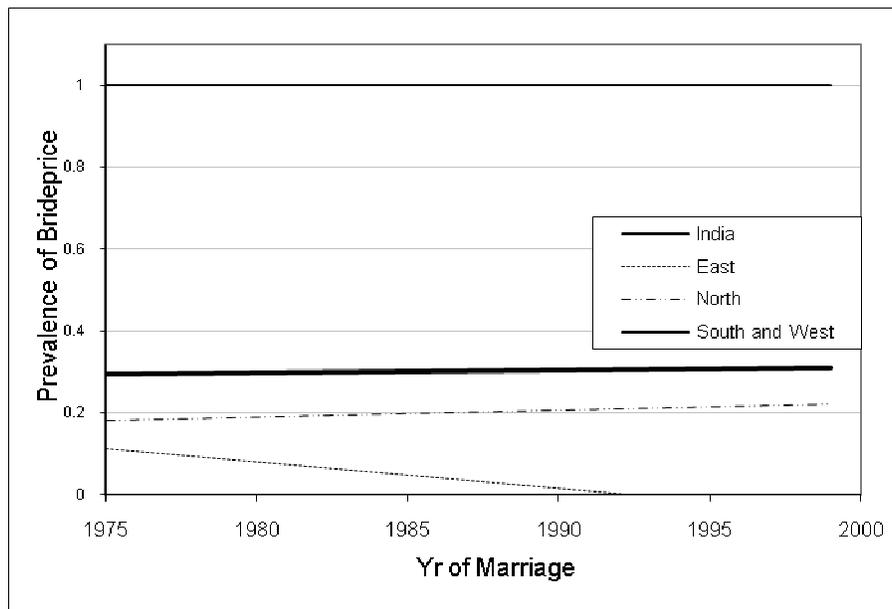
[13] Trends shown in Figure 1 and Figure 2 are not net of other effects.

Figure 3: Predicted Odds Ratio of Paying Dowry over Time by Region
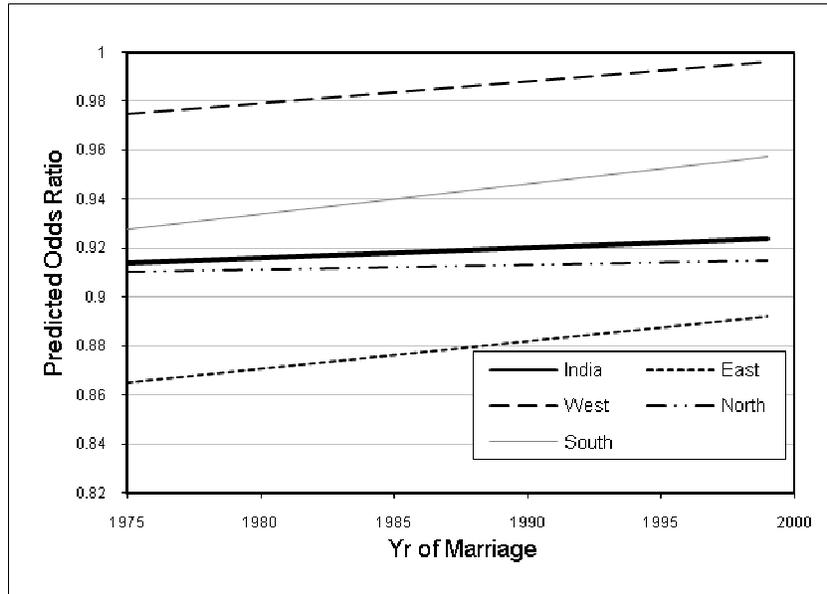

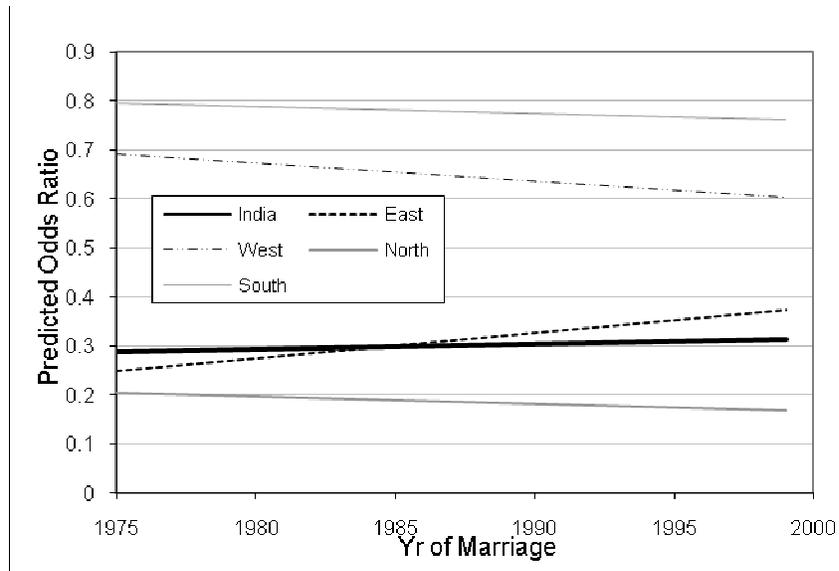**Figure 4: Predicted Odds Ratio of Paying Brideprice over Time by Region**

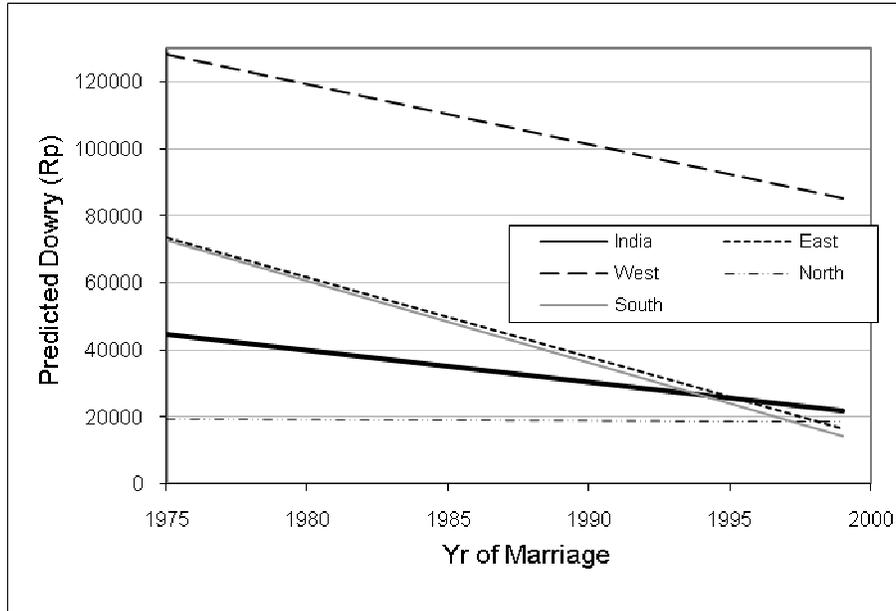**Figure 5: Trend Line of Predicted Value of Dowry over Time**

Figure 6: Trend Line of Predicted Value of Brideprice over Time