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ABSTRACT

This paper is the first systematic attempt to measure the existence and degree of dowry inflation in South Asia. The popular press and scholarly literature have assumed dowry inflation in South Asia for some time, and there are now a number of theoretical papers that have attempted to explain the rise of dowries in South Asia. Despite these advances, there has been no systematic study of dowry inflation. Using large-sample retrospective survey data from India, Bangladesh, Pakistan, and Nepal, we assess the empirical evidence for dowry infllation. We find no evidence that real dowry amounts have systematically increased over time in South Asia.

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1 Introduction

In a typical South Asian marriage, the bride's family transfers a large sum—up to several multiples of annual household income—to the groom's family. In the latter half of the twentieth century, observers began to document what appeared to be a general phenomenon: that dowry amounts were precipitously rising over time. In recent years, the existence of "dowry inflation" over the course of the twentieth century has come to represent a stylized fact about marriage in South Asia. To take two recent examples, the *International Encyclopedia of the Social Sciences* devotes a section on the entry for dowries to the phenomena of "dowry inflation" in South Asia and notes that "India witnessed a real inflation in dowries in the latter half of the twentieth century" (Maitra 2007, p. 5). Also, a recent survey article of the economics of dowry and brideprice devotes a section to the phenomenon of dowry inflation in South Asia (Anderson 2007a).[1] More broadly, dowry inflation has become a defining theme within discussions of the welfare of women in developing countries. Activists and policy-makers have arrayed around the issue, many arguing that the secular rise in dowries in South Asia has exacerbated sex-selective abortion, female infanticide, and other forms of gender-specific maltreatment due to the impending shock to consumption that accompanies the birth of a daughter.

For social scientists accustomed to thinking about marriage as a market, dowry inflation represents a puzzle: how could real dowry amounts rise precipitously in the face of South Asia's declining female-to-male sex ratios? If dowry is essentially a price that equilibrates the marriage market (Becker 1981), declining sex ratios should force dowry amounts downward. A classic demographic explanation, first applied in the South Asian context by Epstein (1973) and Caldwell (1982, 1983), and statistically tested by Rao (1993a), holds that a "marriage squeeze" may account for dowry inflation. The general idea is that a persistent gap in the male-to-female age at marriage combined with population growth and infant mortality declines drives a perpetual (and increasing) scarcity of grooms. More recently, a series of papers have adopted a dynamic marriage market accounting framework to assess the theoretical validity of a marriage squeeze explanation of rising dowries (Anderson (2007b), Neelakantan and Tertilt (2007), Maitra (2006a, 2006b)). Dowry inflation has

[1] The two sources cited by Anderson that support the idea of dowry inflation come from Ifeka (1989), who used a relatively small number of interviews and Paul (1986), who used a non-random sample.

also captured the imagination of scholars in pursuit of even deeper puzzles. Anderson (2003), for example, asks why modernity wrought the decline of dowry elsewhere around the world, but not in South Asia. Finally, a number of studies address the economic implications of dowry inflation on other phenomena such as human capital investment in daughters (e.g., Dasgupta and Mukherjee (2003)).

Especially in light of the popular and scholarly interest in the phenomenon of dowry inflation, the empirical evidence for rising real dowries is thin. Early scholarly accounts of dowry inflation drew from small samples in particular regions of South Asia (Epstein 1973, Billing 1991, 1992). The first statistical evidence for dowry inflation was offered by Rao (1993a, 1993b). In a replication, Edlund (2000) and Rao (2000) were unable to support the marriage squeeze explanation for dowry inflation. The stylized fact of dowry inflation, however, remained unchallenged.

Unfortunately, empirical evidence of dowry inflation is lacking, and since Rao's initial foray there have been only a handful of studies that deal with estimates of dowry inflation. The empirical evidence is mixed. Edlund (2000) replicates Rao's Indian results and finds no evidence of dowry inflation or for the marriage squeeze hypothesis, but Rao (2000) contends that the latter is because he and Edlund use different estimates of the sex ratio. Dalmia and Lawrence (2005) find no association between the marriage squeeze (the average age of marriage adjusted sex ratio) and dowry amounts, and find evidence of dowry deflation over time. Edlund (2006) says that the problem may be the definition of dowry. She distinguishes between gross dowry (all the assets a bride brings with herself into marriage) and net dowry (the value of bride assets minus any groom payments), and finds little evidence for net dowry inflation. Shenk (2005) finds that while marriage costs (ceremonies and gifts, for example) have increased, other elements of dowry do not exhibit dowry inflation. While this existing empirical evidence goes against the conventional wisdom that real dowries are rising over time, the small sample sizes, use of only one data source, and the lack of geographic diversity are weakness that prevent these studies from establishing a general trend. Similarly, the existing evidence looks for dowry inflation in multivariate statistical models that attempt to estimate a dowry function that maps bride and groom characteristics into a dowry. As such, the empirical evidence on dowry inflation is always contained in an analysis of the dowry function itself.

Evidence of dowry inflation from dowry function estimates present a number of problems for

the detection and measurement of dowry inflation. First, if an observation of dowry in a given year does not contain other relevant variables in the dowry function– such as husband's or wife's education– it is omitted from the statistical model. Therefore, only if these other relevant variables are missing at random will the estimates of dowry inflation be unbiased. Second, the discussion (and estimation) of dowry inflation does not require one to estimate a dowry function. The question of dowry inflation is not the prevalence of dowry or characteristics of those participating in the dowry system (where modeling an explicit dowry function is necessary), but whether real dowries have been rising over time more than prices in general. This point is related to the first, but distinct– if no dowry inflation is found in correlations of real dowry and year of marriage, then any dowry inflation that appears in estimates of dowry functions is due to the fact that missing values of other variables in the dowry function are not missing at random with respect to dowry and year of marriage. This would imply that dowry inflation arising from dowry functions are a figment of the data– the results of missing variables being correlated with year of marriage and/or dowry amounts. Third, a more systematic approach to the problem will help establish whether dowries have been rising in South Asia generally or if they have been rising only in particular areas. As the claims about dowry inflation have been quite general (Anderson 2007a), evidence from a number of different sources is necessary to establish the general pattern.

In this paper we ask the following question: Is there any evidence of dowry inflation in South Asia? To answer this question, we adopt a straightforward measure of dowry inflation: the correlation of year of marriage with dowry. In contrast with attempts to measure dowry inflation by regressing dowry amounts on year of marriage and characteristics of the bride and groom (Rao 1993b, Deolalikar and Rao 1998, Dalmia 2004), we think the correlation more properly addresses the simple question of whether dowries have actually risen over time. In estimating the correlation we do not exclude responses with missing values for other variables, make no use of a dowry function, and take a systematic approach to the topic by looking at survey evidence from India, Pakistan, Bangladesh, and Nepal. By keeping our estimation strategy simple, we are able to utilize the most data possible to address the question of interest.

First, we deflate nominal dowries using rice prices to create real dowry values. Using rice prices to deflate nominal values has been the preferred method for estimating real values in developing countries as price indices may not reflect household budgets or consumption choices (see Deaton

2006 and Banerjee and Duflo 2007). Rice prices are closely tied to the well-being of the general population and well-correlated with existing price indices. Second, we use five surveys of South Asian households (International Crops Research Institute for the Semi-Arid Tropics [ICRISAT] and Survey of Women and the Family [SWAF] from India, the Pakistan Integrated Household Survey [PIHS], the Nepal Living Standards Survey [NLSS], and the Matlab Health and Socioeconomic Survey [MHSS] from Bangladesh), to look for evidence of dowry inflation in a number of different sources covering the majority of South Asia. To our knowledge, these are the only widely available sources that can be used to measure dowry inflation in South Asia. We then estimate the correlation of nominal and real dowry with year of marriage, and test the hypothesis that year of marriage and real dowry are positively correlated.

We find no evidence of dowry inflation in any of our sources. In fact, the only statistically significant results we do find indicate that real dowries have fallen over time. Furthermore, in surveys that allow us to distinguish dowries by type we find no evidence of dowry inflation by type of dowry transfer. Our findings complement and expand recent papers which test for dowry inflation. The existing scholarship which attempts to measure dowry inflation continues to do so within the confines of a dowry function (Edlund (2006), Dalmia and Lawrence (2005))– our simple empirical approach is closer to the central question of the existence of dowry inflation. Similarly, our findings are the only findings to extend beyond India to cover other South Asian countries, which is especially important since claims of dowry inflation have been attributed to the subcontinent. Although claims of dowry inflation are quite popular in the press and public imagination, we find no evidence of systematic dowry inflation in South Asia.

2 Real Dowries and the Dowry, Year-of-Marriage Relationship

2.1 Calculating Real Dowries

Retrospective dowry information is always collected in nominal terms (a standard prompt in a survey would be "How much in dowry was paid at the time of your marriage?"), yet claims of dowry inflation hinge on real dowries rising quickly over time. The issue is how to deflate dowries, so that dowry increases or decreases over time reflect general increases in the real (time invariant

value) dowry. While one approach would be to deflate dowries using standard government price indices, these approaches have a number of problems. First, as Deaton (2006) and others have noted, aggregate price indices may have little relation to the economic lives of the average citizen in a poor country, precisely because they purchase relatively few of their goods in the market (Duflo and Banergee 2007). Since families spend a large portion of their resources on food, and since many households are still primarily involved in agriculture, some have advocated that agricultural prices should be used to deflate nominal amounts, as they are closer to actual living standards than aggregate price indices. Using agricultural prices, which show less inflation than general prices, actually biases our results in favor of finding dowry inflation since the deflation is less than we would find using traditional price indices.[2]

To deflate nominal dowry amounts, we follow Khan and Hossain (1989), and Amin and Cain (1998) in using rice prices. No single source contains rice prices for the entire period for which we have reports of nominal dowry, so we constructed a series using the Statistical Abstracts for British India for the period 1910-1946; the Pakistan Central Statistical Office's Statistical Yearbook 1955 for 1949; the Pakistan Central Statistical Office's 20 Years of Pakistan in Statistics for 1950-1967; and the Statistical Yearbooks of Bangladesh for 1965-1996. Duplicate observations for the years 1964 to 1967 were used to convert between takas and rupees, and overlapping medium and common rice prices for the years 1950 to 1967 are used to convert between rice qualities. We used a linear interpolation to cover the missing years (1947-1948). Real dowries are expressed in (medium quality) rice kilograms for all real dowry amounts reported here. Given the strong correlation of our rice price series and the government's estimates of price increases for each of the countries we consider (see appendix), we take this price series as one that corresponds roughly to the region as a whole, and use this same series for all countries.[3]

2.2 Measuring the Dowry, Year-of-Marriage Correlation

We use three approaches to capture the dowry, year-of-marriage relationship. The first approach is the simple ordinary least squares (OLS) linear regression of real dowry on year of marriage. Since this is a simple regression we capture the basic correlation between dowry and year of marriage

[2] The correlation of our price series with the aggregate comsumer and overall price index is quite strong (see appendix).

[3] Naturally, given the high correlation with the published CPI, results with traditional price indices are the same.

under the assumption that the relationship between real dowries and year of marriage is linear where dowry (y) is a function of year of marriage (x)

$$y = \alpha + \beta x + \varepsilon \tag{1}$$

In a simple y on x linear regression the estimate of β is

$$\widehat{\beta} = \frac{\sum (x_i - \overline{x})(y_i - \overline{y})}{\sum (x_i - \overline{x})^2} \tag{2}$$

More importantly, the coefficient of determination, R^2, is

$$R^2 = 1 - \frac{\sum (y_i - \widehat{y_i})^2}{\sum (y_i - \overline{y})^2} \tag{3}$$

because $\widehat{y} = \alpha + \widehat{\beta} x$, with simple algebra it is easy to show that (3) above is equal to

$$R^2 = \frac{(\sum (x_i - \overline{x})(y_i - \overline{y}))^2}{\sum (x_i - \overline{x})^2 \sum (y_i - \overline{y})^2} \tag{4}$$

which is naturally analogous to (and the square of) the dot-product (Pearson) correlation

$$\rho_{x,y} = \frac{Cov(X, Y)}{\sigma_x \sigma_y} = \frac{\sum (x_i - \overline{x})(y_i - \overline{y})}{\sqrt{\sum (x_i - \overline{x})^2} \sqrt{\sum (y_i - \overline{y})^2}} \tag{5}$$

So the simple regression of real dowries on year of marriage gives us not only the estimate of the linear relationship, but the square of the Pearson correlation coefficient as well.

There are a number of problems with the Pearson correlation, however. One problem is that Pearson correlations assume that the relationship between the variables is linear. A second problem is that ordinal values of variables are not dealt with well in the methodology unless the relationship is linear. A third problem is that the correlation estimate is sensitive to the presence of outliers, as are OLS regression coefficients. Spearman's and Kendall's correlations are non-parametric correlation methods that overcome many of these problems, and they also allow us to gauge the robustness of our results. In both Spearman's and Kendall's correlations the data are converted from their numerical values to an ordinal ranking (in our case, the year of marriage and real dowry amount). In practice, the data are sorted on one variable (say, year of marriage) and then the ranking of the other variable (real dowry), relative to the ranking of the first variable form the basis of the Spearman and Kendall measures. In both cases, correlations of the rankings (low/high ranking of year of marriage corresponding to low/high rankings of real dowry) imply a relationship, but unlike Pearson's correlation the relationship is not required to be linear, only monotonically increasing (a much weaker restriction) and the measure is not sensitive to the presence of outliers since values are converted to an ordinal ranking.

The Spearman's correlation coefficient is

$$\rho = 1 - \frac{6 \sum_i d_i^2}{n\left(n^2 - 1\right)} \tag{6}$$

where d_i is the difference between the actual and predicted rank of real dowry by year of marriage. For example, for the earliest marriage ($rank = 1$) we would expect the real dowry to be the lowest value as well ($rank = 1$); if not, the difference between the two would be non-zero, lowering our estimate of the correlation. Standard errors of the correlation are calculated as having a student t distribution under the null hypothesis of no correlation

$$\sigma_\rho^2 = \frac{\left(1 - \rho^2\right)}{(n-2)} \tag{7}$$

This is used to construct confidence intervals around the correlation estimate and for hypothesis testing.

Kendall's correlation also measures the relationship between two rankings. If we let C denote the number of concordant pairs (where the ranks of the two variables agree with one another) and D denote the number of discordant pairs, the general (uncorrected) Kendall correlation is given by

$$\tau_a = \frac{C - D}{\frac{1}{2}n\left(n-1\right)} \tag{8}$$

the correlation measure, like the Spearman's correlation, makes no correction for ties, which can sometimes result is underestimates depending on the different number of ordinal rankings for one variable than another (this is particularly important in our case since we have multiple real dowry observations for the same year of marriage). In this case, a refinement of the Kendall rank correlation corrects for ties

$$\tau_b = \frac{C - D}{\sqrt{\frac{1}{2}n\left(n-1\right) - \frac{\sum x_{i(x_i-1)}}{2}}\sqrt{\frac{1}{2}n\left(n-1\right) - \frac{\sum y_{i(y_i-1)}}{2}}} \tag{9}$$

In applications such as ours, estimates of τ_b will be greater than estimates of τ_a. We can use a normal approximation for the variance of the Kendall correlation. Abdi (2007) notes that for samples greater than ten the sampling distribution of τ converges to a normal distribution with a variance given by

$$\sigma_\tau^2 = \frac{2\left(2N+5\right)}{9N\left(N-1\right)} \tag{10}$$

which can be used to test the null hypothesis of no correlation between the two measures.[4]

In the following section we use these three methods to uncover the empirical relationship between real dowries and year of marriage in five surveys from South Asia. One point should be stressed

[4] Under the null hypothesis of no correlation the variances of τ_a and τ_b will be the same.

about our methodology. First, because we are only concerned about the real dowry and year of marriage relationship it could well hold that any correlation we find is due to omitted variable bias. Therefore, if we find no relationship between dowry and year of marriage in the simple correlation we are even less likely to find it in models of dowry that include these omitted variables such as the sex ratio in the marriage market. The same argument applies if dowry amount and year of marriage are measured with errors that are correlated with one another (for example, those who married long ago may be hazy on the year and/or dowry amount). In both instances one is more likely to find a higher correlation of real dowry with year of marriage than in more fully specified models.

3 Empirical Evidence of Dowry Inflation

3.1 Evidence from ICRISAT (India)

We begin by looking at the data from the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) 1975 household and agriculture survey and the 1983 retrospective marriage survey. This dataset was first assembled along with demographic data from the Census of India by Vijayendra Rao. As the first dataset to contain dowry amounts in India, the ICRISAT data was used in Rao (1993a,b); Deolalikar and Rao (1998) to probe the determinants of dowry inflation. In fact, Rao's papers remain the only published references claiming evidence of dowry inflation using randomly-sampled data on dowry amounts. Subsequent to publication, a comment by Lena Edlund (2000) challenged the robustness of the evidence for a marriage squeeze driving dowry inflation.[5] We follow the suggestion of Edlund and report the net dowry (transfers from bride net of transfers to bride) and year of marriage correlation. We further expand the size of the sample by looking only at the relationship between real dowry and the year of marriage, not the dowry function estimated by Edlund. Regression results are reported in Table 1. In using both net dowry and real net dowry we find no statistically significant evidence of dowry inflation. More importantly, what movement that exists is substantively small, and the result holds when we control for caste using landholding status. The growth rate of dowry amounts (from regressions of log dowry amount on

[5] The key issue was the statistical significance of the coefficient on age-adjusted sex ratio when dowry amounts were regressed on a number of bride and groom characteristics. Neither the comment nor the reply (Rao, 2000) asked whether the ICRISAT data indeed displayed dowry inflation.

year of marriage) is under 1% in all specifications.[6] In those same villages, the growth rate of real income was around 1.5% for the period 1975-1984 and although the data before this period cannot be linked to the ICRISAT villages, most studies find a growth rate of around 1% in most parts of India before 1975 (Kurosaki, 2000). Even when looking only at the marriages of daughters, where parents would potentially have greater recall about dowry amounts transferred, the results show little relationship between the year of marriage and the real or nominal dowry amount.

Table 2 reports the Spearman correlations of dowry with year of marriage. The correlation of real dowry with time is slight, only .08, and not statistically different from zero in any measure. Table 2 also reports the Kendall correlations of dowry with year of marriage, and once again the relationship is very slight. Even after correcting for ties in the correlation, the correlation coefficient for nominal dowries is only .06, and not statistically different from zero, and for real dowries it is negative. In both cases, looking only at the daughter's marriages shows that the correlation between real dowry and year of marriage is negative, although this correlation is not statistically different from zero either.

Why did Rao find dowry inflation in the ICRISAT when we find none? Although we were not able to replicate his finding exactly, perhaps the answer lies in the observations dropped as "missing". As is (unfortunately) customary in the literature, Rao drops observations for which there are missing data in any variable of interest. The problem, of course, is that these are not missing at random. The bulk of these are observations are those for whom wife height is missing. For the whole sample (n=168), the Pearson correlation for net dowry is .1089 (.1601 standard error), while the sample for women who have height observations (n=132) is .1435 (.1006 standard error). Although the average year of marriage is the same as that of the complete sample, this subsample of deleted "missings" reflect a negative relationship between net dowry and year of marriage, leaving Rao with a sample that appears to show evidence of dowry inflation.

3.2 Evidence from The Survey of Women and the Family (India)

The Survey of Women and the Family (SWAF) for India, conducted in 1993 and 1994, contains a sample of over 1,800 women from 28 villages in four regions of India. A key strength of the

[6] When regressing the log net real dowry amounts on year of marriage the coefficient on year of marriage is negative (-.09) and not statistically significant at the 10% level.

SWAF data is that dowries are disaggregated into cash and non-cash components (such as land, cows, etc.). A disadvantage of the SWAF data is that it does not give us specific values for the dowries, but it gives us five ordinal categories that the nominal dowries fall into. For this reason we cannot perform regression analysis or compute Pearson correlations with this data. While we can still see if the average real dowry moves between categories over time, the raw data being ordinal puts limits on the number of categories by design, and therefore may weaken any correlation that may exist if it is not enough to shift the ordinal categories in the survey. A real problem here is that since these are ordinal categories we cannot deflate the dowry amounts, and therefore any correlation we do find may not be correlation of real dowry and year of marriage but nominal dowry and year of marriage. Because of these weaknesses, we view the evidence coming from SWAF as secondary rather than primary since the raw dowry amounts are not in the data. Nevertheless, we do calculate the Spearman and Kendall correlations of dowry by type of dowry (we distinguish between land, jewelry, and cash dowries) and year of marriage.

Table 3 gives the Spearman correlations between dowry and year of marriage by dowry type in the SWAF dataset. As the table shows, the land and jewelry dowries do not correlate significantly with time, and dowries of land transfer appear to be negatively correlated to year of marriage. Cash dowries, however, do seem to increase with year of marriage in a statistically significant way. We should expect some increase in nominal cash dowries over time, however, owing to nominal inflation generally. Table 3 also shows the Kendall correlations for the same relationships, and the pattern of the Spearman correlations holds. The problem with this evidence is in the interpretation– without actual dowries amounts it is impossible to attribute this correlation to dowry inflation and overall price increases (general inflation). What we can say is that, relative to increases in jewelry and land dowries, cash dowries appear to increase with time. This distinction by type of dowry is important in so far as the type of dowry transfer may itself tell us about the changing function of dowry over time. For example, Arunachlam and Logan (2006) disaggregate dowries into regimes, and they find that dowries that function as bequest are more likely to contain non-cash elements as opposed to dowries that function as prices. While we make no claims about the function of dowry here, disaggregation may give us clues to where tales of dowry inflation arise from. To the extent that the conclusions of Arunachalam and Logan hold, the increases in nominal cash dowries in the SWAF data may reflect the changing function of dowry, but without the actual amounts we

cannot draw inferences on dowry inflation itself. Overall, the evidence from both ICRISAT and SWAF give us little evidence that real dowries have been rising over time in India.

3.3 Evidence from the Pakistan Integrated Household Survey

The Pakistan Integrated Household Survey (PIHS) was conducted jointly by the Federal Bureau of Statistics (FBS), Government of Pakistan, and the World Bank in 1991. The purpose of the survey was to provide individual, household, and community level data to analyze the impact of policies on living standards of households. It contains information on housing conditions, education, health, employment, self-employment activities, consumption, migration, fertility, credit and savings, and household energy consumption and covers both urban and rural areas in all four provinces (Punjab, Sindh, NWFP, and Balochistan). The PIHS sample comprised 4,800 households drawn from 300 Primary Sampling Units (PSUs) throughout the country.

A strength of the PIHS data is that, like the SWAF for India, dowry is disaggregated by types (land and non-land). Unlike the SWAF, however, the PHIS records the nominal values of the disaggregated dowry amounts, allowing us to analyze the dowry inflation by type in Pakistan. Table 4 shows the OLS regressions for real and nominal dowries by dowry type. Both nominal total dowries and non-land dowries show little correlation with year of marriage, but both values do have large (but not statistically significant) regression coefficients, as we would expect for nominal values. Real dowries (both total and non-land) are negatively correlated with year of marriage. The Pearson correlation is -.22 for total real dowries and -.44 for real non-land dowries. Table 4 also gives the log dowry relationships. Both log total and log non-land dowries grow at 2.2% per year, but the correlation with year of marriage is slight (.10). Real dowries decline at more than 4% per year, but in log terms the Pearson correlations for both types of dowries are nearly identical (-.20 and -.22 respectively).

Table 5 shows the Spearman correlations for dowries. While nominal dowries and real land dowries are positively correlated with time, real total dowries and real non-land dowries are negatively correlated with time. None of the Spearman correlations is statistically distinguishable from zero, however, so the conclusion from the Spearman correlation is that there is no correlation between dowry and year of marriage, either in real or nominal terms. The Kendall correlations in Table 5 give the same pattern as the Spearman correlations. All nominal dowries are positively

correlated with year of marriage, as are real land dowries, while the non-land dowries are negatively correlated with time, although none of the dowries exhibit statistically significant correlation. The evidence from real non-land dowries here comes from actual values, and as such we can say that non-land dowries have not exhibited any more inflation than land dowries. Similarly, the inflation of cash dowries witnessed in the SWAF seems to be consistent with the nominal results from Pakistan.

3.4 Evidence from the Matlab Health and Socio-Economic Survey (Bangladesh)

We estimate the model using data from 1996 Matlab Health and Socioeconomic Survey (MHSS) in rural Bangladesh. We have 5328 marriages in this dataset in which year of marriage is reported (or can be constructed from age and age at marriage). Of these, 1735 women report a positive dowry at the time of marriage. In 581 marriages, the husband confirmed that a dowry was given, and in 134 marriages, a husband reported a dowry even when the wife did not. This gives a total of 1869 marriages in which dowry was reported. Of these, in 1706 marriages the wife reports the dowry amount (includes the value of goods at the time of marriage). In addition, we have 663 marriages in which the husband reports the dowry amount but the wife does not. In 556 marriages we have two reports of dowry; for the results that follow, we take the average of the reports. All results are qualitatively similar when we exclude husbands' dowry reports.

Table 6 shows the OLS regressions for nominal and real dowries and year of marriage from the Matlab data. The nominal dowries do increase over time, but real dowries actually decrease over time, and both relationships are statistically significant, although neither is strongly correlated with year of marriage (.26 for nominal dowry, -.33 for real dowries). To better gauge the relationship, columns 3 and 4 look at the log of nominal and real dowries, and the coefficients can be interpreted as the percent increase or decrease in their values over time. Nominal dowries grow at 6.2% per year, and the Pearson correlation between year of marriage and log nominal dowries is .48. Real dowries decrease by 2.7% per year, and their Pearson correlation with time is only -.22. This evidence supports the notion that dowries in Bangladesh have actually deflated over time.

Spearman correlations for both real and nominal dowries are shown in Table 7. The correlations follow the pattern from the OLS regressions, and both of the correlations are statistically significant. While nominal dowries are positively correlated with time real dowries are negatively correlated

with time. Kendall correlations reported in Table 7 attenuate the size of the correlation coefficients relative to the Spearman values, but the qualitative implications remain the same. Real dowries show evidence of statistically significant deflation over time in Bangladesh.

3.5 Evidence from the Nepal Living Standards Survey

The Nepal Living Standard Survey (NLSS) was conducted jointly by the Central Bureau of Statistics (CBS), Government of Nepal, and the World Bank in 1995 to gather information at the household level on population, housing, education, agricultural activity, consumption and other socio-economic characteristics to aid in formulating more effective development policies and programs. More than 3,000 households were chosen from four strata based on geographical and ecological regions in the country, with the primary sampling unit being a ward. The survey covers 275 wards with 12 households per ward (16 in the far western region). The sample represents 73 of the 75 districts in Nepal.

Table 8 shows the OLS regressions for nominal and real dowries and year of marriage from the Nepalese data. Nominal dowries do increase over time, but real dowries actually decrease over time, and while the nominal dowry increases are statistically significant, the real dowry decreases are not statistically significant. Beyond this difference is the statistical strength of the relationship, neither real or nominal dowries are highly correlated with year of marriage (.20 for nominal dowry, .00 for real dowries). Columns 3 and 4 of Table 8 look at the log of nominal and real dowries, which measures the percent increase or decrease in dowries over time. Nominal dowries grow at 5.8% per year, and the Pearson correlation between year of marriage and log nominal dowries is .36. Real dowries decrease by 1.2% per year, and their Pearson correlation with time is only -.1. While the growth of nominal dowries is statistically significant, for real dowries the relationship is indistinguishable from zero.

Spearman correlations for both real and nominal dowries are shown in Table 9. The correlations differ from the pattern from the OLS regressions; the nominal dowry correlation is positive and statistically significant while the real dowry correlation coefficient is weakly positive but not distinguishable from zero. In this instance both nominal and real dowries are positively correlated with year of marriage. Kendall correlations reported in Table 9 attenuate the size of the correlation coefficients relative to the Spearman values, but the qualitative implications remain the same.

Real dowries show evidence of weak, but statistically insignificant, deflation over time in Nepal.

4 Conclusions and Implications

From a scholarly perspective,dowry inflation has spurred a flowering of sharp thinking about the economics and sociology of dowry and marriage payments more broadly. In this sense, whether dowry inflation exists or not is somewhat beside the point, as the theory and empirical tools that have been developed to address the issue are of broad utility to social scientists. From a practical and policy-making perspective, however, the question of the existence of dowry inflation is critical. Using basic statistical techniques, we fail to corroborate the widespread claim that real dowry amounts have risen substantially in South Asia.

There are caveats to our approach, however, which temper the urge to view our results as the definitive end of the idea of dowry inflation. First, there was a transition in the second half of the twentieth century where marriage transfers in South Asia moved from being bride prices to dowries (Epstein 1973, Billing 1991, 1992). As we do not have evidence on bride prices we cannot say definitively whether there has been inflation in marriage transfers overall. Second, our results only speak to non-zero dowries, if the transition from bride prices to dowries passes through zero, this will not be recorded as a dowry in our categorization. Third, we do not address the important issue of participation in the dowry system, which may be increasing over time and conflated with the idea of dowry inflation in the literature. Lastly, we do not address the issue of marriage transfers outside of the dowry itself, which may also be conflated with the concept of dowry inflation. Shenk (2005), for example, finds that while marriage costs (ceremonies and gifts) have increased, dowry itself has not risen over time in India. Even with these caveats, our results cause us to question the existence of dowry inflation. Further retrospective studies of marriage transfers in South Asia are needed to uncover the links between marriage transfers and social and economic outcomes for women in South Asia.

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Table 1
OLS Regressions of Dowry and Year of Marriage, ICRISAT

	Full Sample		Daughter Marriages Only	
	I Net Dowry	II Real Net Dowry	III Net Dowry	IV Real Net Dowry
Year of Marriage	256.93 [178.94]	-603.94 [452.90]	-534.77 [321.01]	-47.89 [35.19]
Constant	-9,150.88 [9989.63]	43,255.49 [25283.66]	1057648.31 [635956.64]	94,654.75 [69705.40]
Observations	169	169	65	65
R-squared	0.01	0.01	0.04	0.03

	Full Sample		Daughter Marriages Only	
	V Net Dowry	VI Real Net Dowry	VII Net Dowry	VIII Real Net Dowry
Year of Marriage	-73.15 [216.79]	-9.99 [24.42]	-592.54 [313.38]	-54.48 [34.24]
Landholding Class?	-0.55 [504.76]	5.55 [56.85]	-1499.76 [699.38]*	-171.06 [76.42]*
Constant	144,729.39 [429461.52]	19,770.91 [48370.67]	1174539.68 [620934.21]	107,987.50 [67849.23]
Observations	119	119	65	65
R-squared	0	0	0.11	0.1

Standard errors in parentheses
* significant at 5%; ** significant at 1%

Note: Landholding class is defined as the family of the bride holding land.

Table 2
Spearman and Kendall Correlations of Net Dowry and Year of Marriage, ICRISAT

	Spearman Correlation	Standard Deviation	95% Confidence Interval	
A. Full Sample (N=169)				
Nominal Net Dowry	0.084	0.071	-0.055	0.223
Real Net Dowry	-0.047	0.086	-0.216	0.121
B. Daughters Marriages Only (N=65)				
Nominal Net Dowry	-0.077	0.146	-0.363	0.209
Real Net Dowry	-0.031	0.140	-0.305	0.244

		Kendall Correlation	Standard Deviation	95% Confidence Interval	
C. Full Sample (N=169)					
Nominal Net	τ_a	0.060	0.050	-0.039	0.158
Dowry	τ_b	0.060	0.050	-0.038	0.159
Real Net Dowry	τ_a	-0.016	0.054	-0.122	0.090
	τ_b	-0.016	0.059	-0.132	0.099
D. Daughters Marriages Only (N=65)					
Nominal Net	τ_a	-0.050	0.098	-0.242	0.143
Dowry	τ_b	-0.054	0.108	-0.267	0.159
Real Net Dowry	τ_a	-0.018	0.098	-0.210	0.173
	τ_b	-0.020	0.104	-0.224	0.184

Note: Authors' Calculations

Table 3

Spearman and Kendall Correlations for Dowry and Marriage Year by Type, SWAF

	Obs	Spearman Correlation	Standard Deviation	95% Confidence Interval	
Land Dowry	1650	-0.007	0.024	-0.055	0.040
Jewelry Dowry	1644	0.037	0.024	-0.011	0.085
Cash Dowry	1619	0.086	0.026	0.036	0.136
		Kendall Correlation	Standard Deviation	95% Confidence Interval	
Land Dowry	τ_a	-0.001	0.003	-0.007	0.005
	τ_b	-0.006	0.019	-0.043	0.031
Jewelry Dowry	τ_a	0.023	0.016	-0.007	0.054
	τ_b	0.029	0.020	-0.011	0.068
Cash Dowry	τ_a	0.054	0.015	0.024	0.084
	τ_b	0.070	0.019	0.032	0.107

Note: Authors' Calculations.

Table 4
OLS Regression of Dowry and Year of Marriage, PIHS

	I Total Dowry	II Non-Land Dowry	III Real Total Dowry	IV Real Non-Land Dowry
Year of Marriage	539.921 [664.84]	328.658 [300.12]	-310.06 [53.17]**	-326.502 [26.18]**
Constant	-16,747.38 [58512.15]	-2,092.97 [26413.30]	29,944.38 [4,679.03]**	31,084.69 [2,303.85]**
Observations	657	657	657	657
R-squared	0	0	0.05	0.19

	V Log Total Dowry	VI Log Non-Land Dowry	VII Log Real Total Dowry	VIII Log Real Non-Land Dowry
Year of Marriage	0.022 [0.01]**	0.022 [0.01]**	-0.041 [0.01]**	-0.042 [0.01]**
Constant	7.572 [0.67]**	7.606 [0.66]**	10.686 [0.67]**	10.721 [0.66]**
Observations	657	656	657	656
R-squared	0.01	0.01	0.04	0.05

Standard errors in parentheses
* significant at 5%; ** significant at 1%

Table 5

Spearman and Kendall Correlations of Dowry and Year of Marriage, PIHS

	Obs.	Spearman Correlation	Standard Deviation	95% Confidence Interval	
Total Dowry	657	0.059	0.038	-0.016	0.134
Land Dowry	657	0.039	0.026	-0.013	0.091
Non-Land Dowry	657	0.053	0.039	-0.025	0.130
Real Total Dowry	657	-0.044	0.039	-0.121	0.034
Real Land Dowry	657	0.039	0.025	-0.010	0.088
Real Non-Land Dowry	657	-0.050	0.042	-0.132	0.032

		Kendall Correlation	Standard Deviation	95% Confidence Interval	
Total Dowry	τ_a	0.039	0.027	-0.015	0.092
	τ_b	0.042	0.027	-0.011	0.095
Land Dowry	τ_a	0.003	0.003	-0.002	0.008
	τ_b	0.034	0.023	-0.012	0.080
Non-Land Dowry	τ_a	0.035	0.026	-0.017	0.087
	τ_b	0.038	0.029	-0.020	0.096
Real Total Dowry	τ_a	-0.029	0.026	-0.080	0.023
	τ_b	-0.031	0.030	-0.090	0.027
Real Land Dowry	τ_a	0.003	0.003	-0.002	0.008
	τ_b	0.034	0.025	-0.014	0.083
Real Non-Land Dowry	τ_a	-0.033	0.027	-0.086	0.020
	τ_b	-0.036	0.030	-0.095	0.024

Note: Authors' Calculations.

Table 6
OLS Regression of Dowry and Year of Marriage, MHSS

	I Nominal Dowry	II Real Dowry	III Log Nominal Dowry	IV Log Real Dowry
Year of Marriage	174.21 [18.32]**	-110.77 [8.94]**	0.06 [0.003]**	-0.03 [0.003]**
Constant	-8,903.85 [1,509.17]**	10,111.23 [736.76]**	2.99 [0.27]**	8.39 [0.27]**
Observations	1220	1220	1220	1220
R-squared	0.07	0.11	0.23	0.05

Standard errors in parentheses
* significant at 5%; ** significant at 1%

Table 7
Spearman and Kendall Correlations of Dowry and Year of Marriage, MHSS

	Obs.	Spearman Correlation	Standard Deviation	95% Confidence Interval	
Nominal Dowry	1220	0.455	0.025	0.405	0.504
Real Dowry	1220	-0.149	0.031	-0.209	-0.088

		Kendall Correlation	Standard Deviation	95% Confidence Interval	
Nominal Dowry	τ_a	0.321	0.019	0.283	0.358
	τ_b	0.327	0.019	0.290	0.365
Real Dowry	τ_a	-0.098	0.021	-0.140	-0.055
	τ_b	-0.099	0.022	-0.143	-0.056

Note: Authors' Calculations.

Table 8

OLS Regression for Dowry and Year of Marriage, NLSS

	I	II	III	IV
	Nominal Dowry	Real Dowry	Log Nominal Dowry	Log Real Dowry
Year of Marriage	218.47	-2.68	0.06	-0.01
	[89.61]*	[6.01]	[0.01]**	[0.01]
Constant	-431,320.51	5,595.37	-108.159	29.915
	[178,213.43]*	[11945.55]	[24.63]**	[25.35]
Observations	146	146	146	146
R-squared	0.04	0	0.13	0.01

Standard errors in parentheses

* significant at 5%; ** significant at 1%

Table 9
Spearman and Kendall Correlations of Dowry and Year of Marriage, NLSS

	Obs	Spearman Correlation	Standard Deviation	95% Confidence Interval	
Total Nominal Dowry	146	0.358	0.085	0.190	0.526
Total Real Dowry	146	0.040	0.092	-0.140	0.221

		Kendall Correlation	Standard Deviation	95% Confidence Interval	
Total Nominal Dowry	τ_a	0.252	0.057	0.140	0.365
	τ_b	0.268	0.063	0.144	0.392
Total Real Dowry	τ_a	0.033	0.065	-0.095	0.161
	τ_b	0.034	0.066	-0.096	0.165

Note: Authors' Calculation.

1 Appendix

A key element to our analysis is that the rice price series should be used to deflate dowry amounts. If the rice price series is incorrect or prone to error, however, the conclusions that we draw from correlations of our deflated dowries with time are suspect. In Table A we show the sources used to construct our rice price series. In Table B we show the correlation of our rice price series with two aggregate measures of price levels from the *Penn World Tables*, which measure both overall and consumer price levels for each country for which we have dowry data. Table B shows that the correlation of our price series with both types of price series is quite strong– above .65 in all instances. Also, with the exception of Bangladesh, the correlations are all above .85, suggesting that our results would change little if we used either of these aggregate price series instead of our rice price series.

The lower panel of Table B shows estimates from the growth rate of GDP per capita from 1950 to 2000. As the estimates show, there were high levels of growth of income per person in the second half of the twentieth century. As such, the growth of dowries would have to be extraordinarily high to outpace the growth of income person.

2 Data Appendix

2.1 ICRISAT

The ICRISAT survey began in May 1975 covering six villages in three districts, two from Maharashtra and one in Andra Pradesh, while another 4 villages from two other districts, one from Gujarat and the other from Madhya Pradesh, were added in 1980. The main objective of the ICRISAT was to understand the socioeconomic, agro-biological, and institutional constraints to agricultural development in Semi-Arid Tropical (SAT) areas and to gather information to help in generating feasible technologies that would be acceptable to the farmers.

The five districts selected in the ICRISAT represent the major agro-climatic zones within the SAT of India. A representative taluka was selected from each district, and about 12 to 20 villages in the tulaka were visited for each one that was chosen that represented the typical characteristics of the taluka. A total of 40 respondent households were selected from each village to ensure representation of all categories of households - labor, small farmers, medium farmers, and large farmers (10 landless labor household and 30 cultivator households).

The ICRISAT consists of various schedules. The C Schedule contains information on household members – age, sex, marital status, education level, primary and secondary education of household members, including permanent servants, attached laborers, and other non-relatives. Another five schedules: E, F, G, N, and P make up the General Endowment Schedule. E, F, G, and N schedules give inventory files for animals, farms implements, and current physical stock (such as food grains, fodder, farm inputs, and building materials, etc.), while the P Schedule provides information on financial assets and liabilities, such as bank accounts, life insurance, and loans. Schedule Y provides information on plot and cultivation schedule to record operation-wise input-output data for each plot/subplot making a household's/farmer's holdings.

Schedule L (or the LFILES) consists of a group of nine files containing household transaction data. Each transaction is recorded as a separate observation. The dowry transactions are identified using the account and item codes. Transactions for income/expenses owing to gift, dowry remittances, pension, theft, etc. have an account code number 64, while transactions related to marriage of own son have an item code 5 and those related to the marriage of own daughter an item code 6. After identifying the dowry transactions for own son or daughter for the household, the transactions are summed for each year to get the total value of dowry received by the household and the total value of dowry paid by the household. The total number of dowry observations is 119, of which those related to marriage of own daughter is 65.

Dowry information: Note that net dowry used in the correlations and scatterplot is defined as the difference in the dowry paid to the other side in the marriage to that coming into the household from the other side in the marriage, i.e. dowry_out – dowry_in, so a positive net dowry value means that the household is giving more in dowry than it is getting from the other side in the marriage. Summary statistics are listed in Appendix Table C.

2.2 SWAF

The Survey on the Status of Women and Fertility (or SWAF) was initiated with a grant competition by the Rockefeller Foundation's Population Sciences Division that sought to foster research on the relationship between the status of women and fertility. These surveys were initiated to provide measures of women's autonomy and the roles played by women within households and communities that were lacking in existing surveys. The surveys were fielded in 1993 and 1994. SWAF India sought to have 1600 respondents with 800 each from the states of UP and Tamil Nadu. Two sites were chosen from each state; one that was developed and the other that was poorly developed, with the aim of drawing 400 respondents from each site equally divided into Hindus and Muslims. Districts in each of the states were ranked, and the least and the most developed districts with sufficient proportion of the population being Muslim and which weren't politically unstable were chosen. Similarly, talukas (sub-districts) in the chosen districts were ranked and one of the most developed ones was chosen for the developed district, while one of the least developed ones was chosen for the lesser-developed district. Once the talukas were chosen, village lists were drawn up and contiguous villages were combined to form clusters of 1000-2000 households, and the cluster to be included in the sample was then randomly selected. However, the actual survey has 2446 respondents, 1551 of which are drawn from Tamil Nadu.

Dowry information: The sample is restricted to respondents who were married one or more times (1842 respondents). Respondents give information about whether or not they received dowry and if so they categorize the level of payment (None, a little, moderate amount, a lot, don't know value) for each type of dowry, i.e. land, jewelry and cash. The correlations between dowry and year are computed using the sample of respondents who said that dowry or gifts of bride price was paid in their marriage and who did not give a "don't know value" response for each of the types. Out of the 1842 respondents, 1658 said that some form of dowry or gifts was paid during their marriage. The year of marriage was computed using the year of birth and age at the time of marriage. Respondents were asked to give both age at the time of marriage and the age and year/month of *gauna*, i.e. the time when the husband and wife start living together. The dowry and year correlations use year of marriage and not the year of *gauna*. Summary statistics are listed in Appendix Table D.

2.3 PIHS

The dowry information is collected in the following part of the survey: Section 15 - Credit and Savings, Part D2 – Dowries, in which the primary respondent is female. The sample for the dowry/year correlations is restricted to married women who responded that dowry was provided by her family and the sum of payments for the various forms of dowry did not add to zero. Year of marriage took place between 1984 and 1991 for all 657 respondents who paid some form of dowry. Questions were asked about value of dowry paid as agricultural land, jewelry/currency, household effects, and other goods and properties. The values for the various forms of dowries are summed to get the value of total dowry paid for the woman's marriage. Summary statistics are listed in Appendix Table E.

2.4 MATLAB

There are 5312 women for whom year of marriage is reported or can be reconstructed from age and age at marriage. In addition, we have 391 previous marriages reported, giving a total of 5703 marriages. Of these, 1731 women report a positive dowry at the time of marriage. In 562 marriages, the husband confirmed that a dowry was given, and in 112 marriages, a husband reported a dowry even when the wife did not. This gives a total of 1843 marriages in which dowry was reported. Of these, in 1704 marriages the wife reports the dowry amount (including the value of goods at the time of marriage). In addition, we have 663 marriages in which the husband reports the dowry amount but the wife does not. In 556 marriages we have two reports of dowry; for the results reported, we take the average of the reports. All results are qualitatively similar when we exclude husbands' dowry reports. Summary statistics are listed in Appendix Table F.

2.5 NLSS

The NLSS asked about dowry information at the household level in Section 6, Part C, under "Inventory of Durable goods." Questions were asked about the household ownership of the following items, the number of items owned, how many years ago they were acquired, and to classify whether they were purchased, given as gifts, or as dowry/inheritance: Radio/cassette player, Camera/camcorder, Bicycle, Motorcycle/scooter, Motor car, etc., Refrigerator/freezer, Washing machine, Fans, Heaters, Television/VCR, Pressure lamps/petromax, Telephone sets/cordless, Sewing machine. The respondents do not classify the items as purchased, gifts, or dowry/inheritance for the following: Furniture and rugs, Kitchen utensils, and Jewelry. So these items were excluded when obtaining the dowry values.

Since the information is at the household level and not at the individual level, the year of marriage is based on the responses for "how many years ago the item was acquired." If the household reported multiple items for a single year, the values of the items for the year are summed to get the total dowry figure for that year. There are a total of 146 dowry observations in the dataset. Summary statistics are listed in Appendix Table G.

Table A: Rice Price Sources

Years covered	Source	Details
1910-1929	Statistical Abstract for British India 1931	No. 300, pg. 671 [Variations in Average Annual Retail Prices Current of Food Grains in British India]. Common rice in Dacca, rupees per maund (base year: 1873= 100 rupees).
1912-1932	Statistical Abstract for British India 1934	No. 301, pgs. 764-765 [Average Annual Retail Prices Current of Food Grains in British India]. Common rice in Dacca, rupees per maund.
1930-1939	Statistical Abstract for British India 1941	No. 164, pg. 445 [Average Annual Retail Prices Current of Food Grains in British India]. Common rice in Dacca, rupees per maund.
1942-1946	Statistical Abstract, India 1949	No. 165, pg. 1238 [Average Annual Retail Prices Current of Food Grains in British India]. Common rice in Dacca, rupees per maund.
1949	Statistical Yearbook 1955, Pakistan Central Statistical Office	No. 67, pg. 105 [Average (Annual) Retail Prices of Important Articles Consumed by the Industrial Workers at Dacca]. Medium rice, rupees per seer.
1950-1967	20 Years of Pakistan in Statistics, Pakistan Central Statistical Office	Table 11.7 [Average Retail Prices of Basic Articles of Consumption in East Pakistan]. Common and medium rice in Dacca, rupees per seer.
1965-1967	Statistical Yearbook of Bangladesh 1975	Table 8.1 [Annual Average Retail Price of Selected Consumer Goods in Dacca, pg. 195]. Medium rice, takas per maund.
1968-1978	Statistical Yearbook of Bangladesh 1979	Table 10.6 [Annual Average Retail Price of Selected Consumer Goods in Dhaka, pg. 374]. Medium rice, takas per maund.
1978-1988	Statistical Yearbook of Bangladesh 1989	Table 10.16 [Annual Average Retail Price of Selected Consumer Goods in Dhaka, pg. 448]. Medium rice, takas per seer.
1987-1996	Statistical Yearbook of Bangladesh 1997	Table 10.16 [Annual Average Retail Price of Selected Consumer Goods in Dhaka, pg. 477]. Medium rice, takas per kilogram.

Unit conversions (*2000 Statistical Yearbook of Bangladesh*, pgs. 645-650):
1 kilogram = 1.071 seer = .0267 maund.

Table B

Price Index Correlation and Income Growth Estimates for South Asian Countries, 1950 to 2000

Correlation of Rice Price Index with:

	Years Covered	Price Level of GDP	Price Level of Consumption
Bangladesh	1972 - 2001	0.6545	0.6584
India	1950 - 2001	0.9176	0.9374
Nepal	1960 - 2001	0.9045	0.9020
Pakistan	1950 - 2001	0.8730	0.8788

Note:
Price Level of GDP and Price Level of Comsunption come from the Penn World Tables. The price level of GDP is measured in each year relative to the United States (US = 100). The Price level of consumption is purchasing power parity of consumption divided by the exchange rate.

Annual Growth Rate of Per Capita Income (% per year)

	1950-1955	1955-1960	1960-1965	1965-1970	1970-1975	1975-1980	1980-1985	1985-1990	1990-1995	1995-2000
Bangladesh						8.03	5.73	6.41	3.24	3.92
India	4.50	4.51	3.55	7.09	7.29	10.02	8.78	7.43	4.78	6.02
Nepal			2.21	5.20	7.26	7.10	8.24	5.20	5.07	3.75
Pakistan	0.05	2.79	6.21	8.19	8.55	11.15	8.38	5.78	4.84	1.50

Note:
GDP per capita comes from the Penn World Tables.

Appendix Table C: Descriptive Statistics for ICRISAT

Variable	Obs	Mean	Std. Dev.	Min	Max
Year of Marriage	169	1954.82	10.57	1923	1978
Rice Price	169	0.80	0.77	0.11	4.38
Husband Years of Schooling	169	2.77	3.41	0.00	16.00
Wife Years of Schooling	169	0.94	2.18	0.00	11.00
Male age at Marriage	169	21.38	4.82	9.00	40.00
Female age at Marriage	169	14.54	5.07	2.00	36.00
Nominal Net Dowry	169	4934.87	24585.81	-58501.00	86763.00
Husband's Height (cm)	148	162.15	6.55	144.00	180.00
Wife's Height (cm)	137	149.43	4.79	135.75	161.50
Real Net Dowry	169	10145.80	62174.28	-273578.20	340245.00

Note: Authors' Calculations

Appendix Table D: Descriptive Statistics for SWAF

Variable	Obs	Mean	Std. Dev.	Min	Max
Dowry	1842	1.57	0.98	1	2
Land Dowry	1658	0.03	0.30	0	3
Jewelry Dowry	1658	1.97	1.13	0	3
Cash Dowry	1658	1.00	1.57	0	3
Car Dowry	1658	4.94	0.47	1	5
TV Dowry	1658	4.89	0.64	1	5
Radio Dowry	1658	4.30	1.52	1	5
Bike Dowry	1658	4.33	1.49	1	5
Animal Dowry	1658	4.57	1.24	1	5
Year of Marriage	1842	1981.09	7.10	1962	1993

Note: Authors' Calculations. This sample contains the reports only of women who have ever married.

Descriptive Statistics By Dowry Type, SWAF

Variable	Obs	Mean	Std. Dev.	Min	Max
A. Land Dowry					
Dowry	1650	1.36	0.48	1	2
Land Dowry	1650	0.02	0.20	0	3
Year of Marriage	1650	1981.34	7.05	1963	1993
B. Jewelry Dowry					
Dowry	1644	1.36	0.48	1	2
Jewelry	1644	1.94	1.04	0	3
Year of Marriage	1644	1981.37	7.02	1963	1993
C. Cash Dowry					
Dowry	1619	1.37	0.48	1	2
Cash Dowry	1619	0.84	1.10	0	3
Year of Marriage	1619	1981.36	7.02	1963	1993

Note: Authors' Calculations. This sample retains only those observations without missing values for the respective dowries.

Appendix Table E: Descriptive Statistics for PIHS

Variable	Obs	Mean	Std. Dev.	Min	Max
Year of Marriage	657	1987.78	6.35	1915	1991
Rice Price	657	12.09	1.62	0.14	13.59
Land Dowry	657	3890.41	97545.42	0	2500000
Jewelry Dowry	657	7255.05	19729.98	0	400000
Household Effects Dowry	657	17689.63	26919.67	0	400000
Other Dowry	657	1812.26	9238.04	0	150000
Total Dowry	657	30647.35	108138.90	12.00	2500000
Non-Land Dowry	657	26756.94	48835.66	0	950000
Real Total Dowry	657	2727.03	8864.73	0.98	194552.50
Real Land Dowry	657	302.98	7591.17	0	194552.50
Real Jewelry Dowry	657	616.90	1652.16	0	32626.43
Real Household Effects Dowry	657	1655.61	3317.08	0	49765.56
Real Other Dowry	657	151.54	805.40	0	12234.91
Real Non-Land Dowry	657	2424.04	4734.19	0	77487.77

Note: Authors' Calculations

Appendix Table F: Descriptive Statistics for MHSS

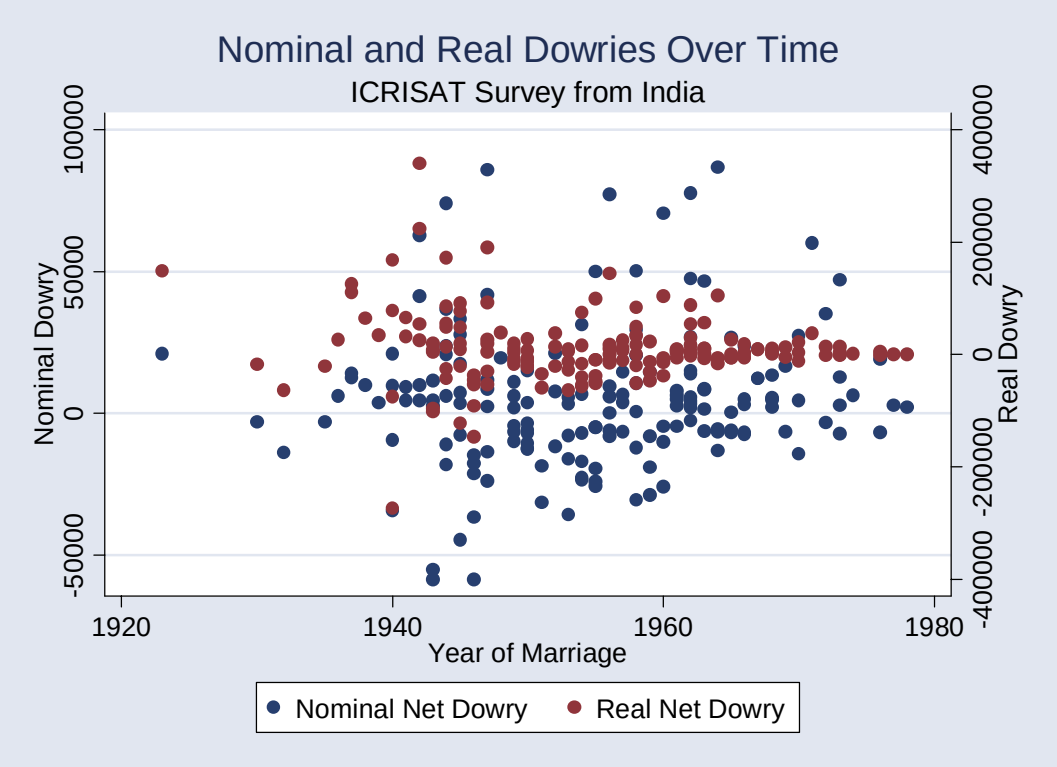
Variable	Obs	Mean	Std. Dev.	Min	Max
Rice Price	1220	8.430	4.50	0.16	16.22
Year of Marriage	1220	1981.86	9.27	1933	1996
Wife's Age at Marriage	1220	16.51	3.35	7	33
Husband's Age at Marriage	1220	24.74	6.19	0	78
Wife's BMI	1220	18.98	2.67	6.76	59.21
Husband's BMI	1220	18.75	2.15	6.13	33.44
Hindu	1220	0.17	0.37	0	1
Wife has Primary Education	1220	0.37	0.48	0	1
Husband has Primary Education	1220	0.30	0.46	0	1
Remarriage	1220	0.11	0.31	0	1
Love (Self Arranged) Marriage)	1220	0.01	0.11	0	1
Real Dowry	1220	1043.66	3071.40	10.00	65317.30
Nominal Dowry	1220	5357.41	6145.33	6	79999.99

Note: Authors' Calculations.

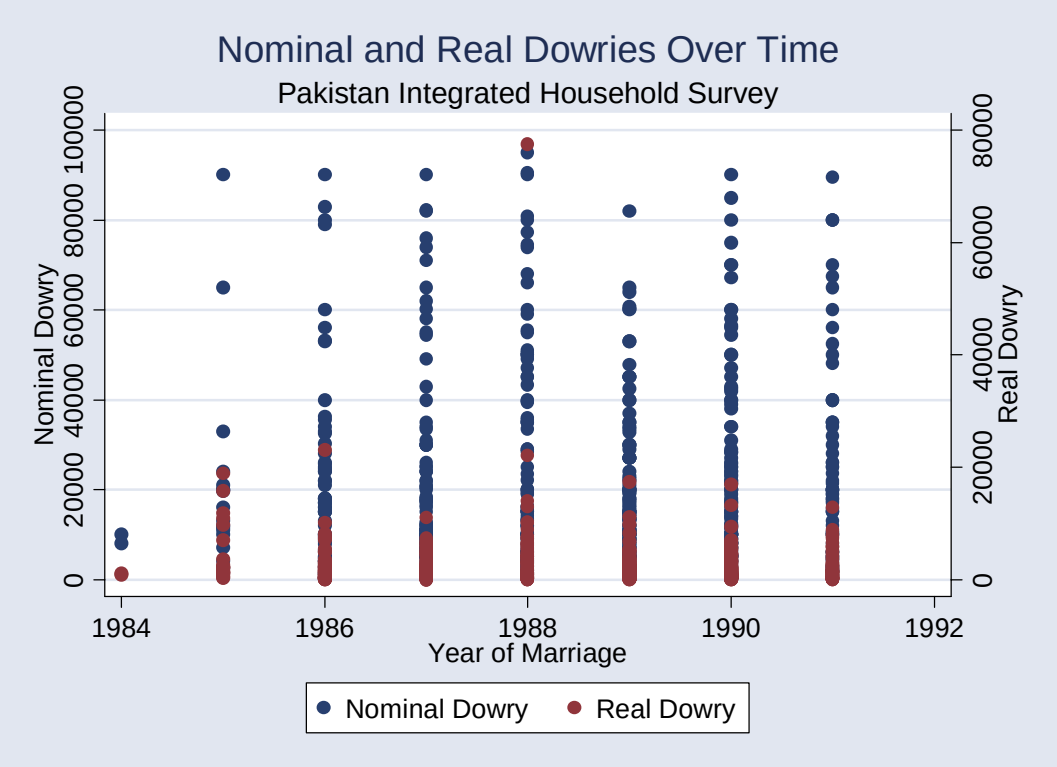
Appendix Table G: Descriptive Statistics for NLSS

Variable	Obs	Mean	Std. Dev.	Min	Max
Year of Marriage	146	1988.747	5.77487	1962	1995
Rice Price	146	12.07715	3.044418	0.8787871	16.22
Nominal Dowry	146	3159.199	6336.736	250	56000
Real Dowry	146	259.3161	416.5325	21.83406	3493.45

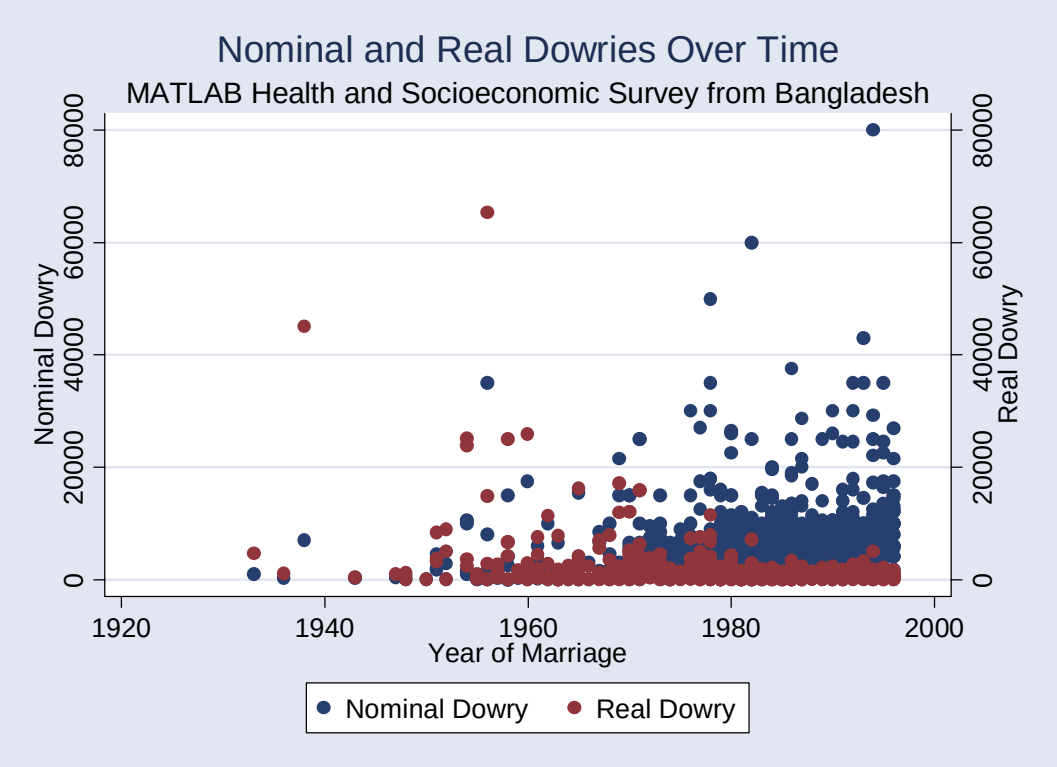
Note: Authors' Calculations.



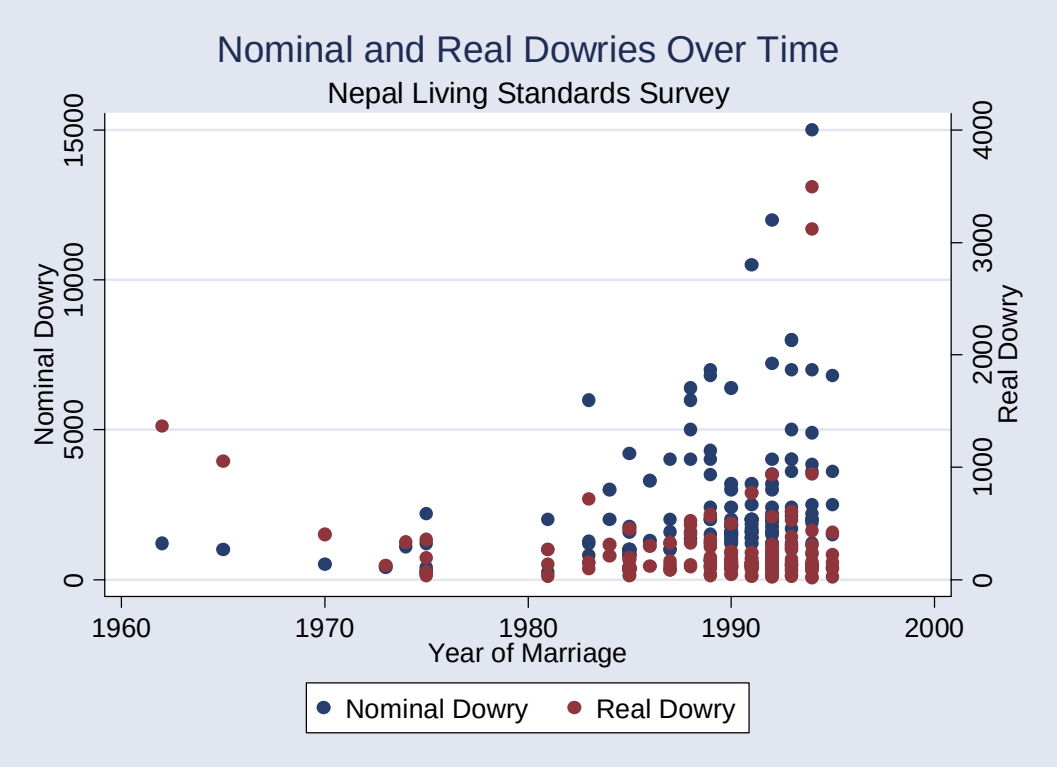
Appendix Figure 1



Appendix Figure 2



Appendix Figure 3



Appendix Figure 4