Research Article

Can status exchanges explain educational hypogamy in India?

Koyel Sarkar

Contents

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Koyel Sarkar[1]

Abstract

BACKGROUND
In contrast to global trends in which education hypogamy occurs when a reversal in the gender gap has taken place, an increase in women's education in India is closely followed by hypogamy, although women are still the less-educated gender. Two trends associated with this development suggest that educational hypogamy is a product of status exchange: an increase in educational hypogamy among lower-caste groups and a slow rise in caste exogamy.

OBJECTIVES
The primary objective of this study is to determine whether status exchanges can explain educational hypogamy in India. The initial assumptions are that educational hypogamy can be explained by the desire of women to 'marry up' to attain the caste of the husband and of women who belong to higher castes (who have less to gain by caste status) to 'marry up' to benefit from the occupation of the husband.

METHODS AND RESULTS
The Indian Demographic and Health Survey 2015–2016 dataset and logistic regression models were used to address the research question. The findings suggest that the educational trade-off with social and economic exchanges is interconnected, which is affected significantly by the caste groups to which the women and their prospective husbands belong. When marrying less-educated men, the preference to rise by caste is high among lower-caste women, whereas the preference to rise by occupation is important among women belonging to higher castes.

CONTRIBUTION
This study solves the Indian hypogamy puzzle by applying status-exchange mechanisms through education, caste, and occupation in the marriage market. It also shows that the growth in educational achievement for Indian women does not diminish social inequalities but provides other means by which social status can be exchanged.

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1. Introduction

The practice of assortative marriages in culturally diverse societies has interested researchers for a long time and has resulted in studies that are particularly helpful in understanding not only whether social boundaries weaken with time and development but also how the couple formation evolves within societies. India is one of the most culturally diverse countries today; however, assortative mating in this country has not been thoroughly researched. This is primarily because most marriages in India are endogamous (both partners have similar ascribed traits by birth, such as caste, language, religion, or race). With the availability of new datasets and information on Indian marriage patterns, researchers have conducted studies that reveal interesting approaches to couple formation for both men and women (Allendorf and Pandian 2016; Lin, Desai, and Chen 2020).

In 21st-century North American and European countries, where interracial and intereducational marriages are common, cases of exogamous (in which partners have different ascribed traits) and heterogamous marriages (in which partners have different achieved traits after birth, such as education) are widely documented. Studies have shown that across societies in which educational heterogamy prevails among women, hypergamy (marrying a more highly educated person), rather than hypogamy (marrying a less-educated person), is a characteristic pattern (Esteve, Cortina, and Cabré 2009; Esteve, García-Román, and Permanyer 2012). With a decreasing gap in education levels between genders, homogamy (marrying someone with equal education) takes over (Kalmijn and Flap 2001; Schwartz and Mare 2005; Munshi 2019). Hypogamy, however, commences when gender gaps have reversed and women have become the more highly educated gender, as documented in studies of assortative marriages conducted in European countries (Van Bavel 2012; De Hauw, Grow, and Van Bavel 2017).

In India, education levels have steadily increased in the last few decades at a faster rate among females than among males, greatly decreasing the gap between genders. According to estimates provided by the Indian Demographic and Health Survey 2015–2016 (DHS), the number of women with no education had decreased from more than 55% to less than 20%. The number of those who have completed secondary education had increased over the birth cohorts from 20% to more than 65% (Figure 1a). However, in contrast to global trends in which a decreasing gender gap leads to a decrease in hypergamy and an increase in homogamy, this rise in women's educational achievement in India has been closely followed by a decline in both educational hypergamy and homogamy (Esteve, García-Román, and Permanyer 2012). Notably, results reveal an increase in educational hypogamy (Kashyap, Esteve, and García-Román 2015), from less than 5% to more than 30% over the marriage cohorts (Figure 1c). This increase in education hypogamy takes place, although Indian women are the lesser-educated gender,

unlike in the European or American cases, where hypogamy is again associated with a gender reversal in education. This study attempts to explain this unexpected shift in marriage patterns within a context in which women still do not outnumber men in higher education achievement by examining status-exchange mechanisms.

Figure 1:   **Education expansion over birth cohorts among (a) women and (b) men, and (c) education assortative marriages among women over marriage cohorts**
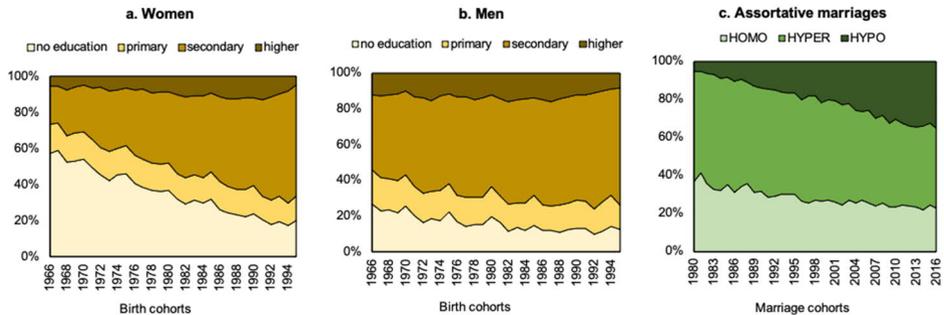
Source: DHS 2015–2016.

The data provided in the couple file from the Indian DHS 2015–2016 (Table 1) reveal an interesting picture of educational hypogamy in India. The increase in the number of women 'marrying low' by education is found mainly among the lower-caste groups: the scheduled castes (SC) and scheduled tribes (ST). This means that the caste group to which the women belong could play a role in the observed incidences of educational hypogamy. More precisely, women of a lower caste may use their higher education to marry someone of a higher caste. The slight increase in caste exogamy in the marriage cohorts reported in Table 1 supports this hypothesis. Although endogamous marriages by caste and religion continue to represent the majority of Indian marriages (Goli, Singh, and Sekher 2013), recent research has also shown a slow rise in exogamy (Allendorf and Pandian 2016; Ahuja and Ostermann 2016; Sarkar and Rizzi 2020). This pattern of marrying down in terms of education, especially among lower-caste women, complemented by the rise in marrying outside caste boundaries, could indicate the emergence of a possible platform for status exchange in marital dynamics in India.

According to the status-exchange theory (Davis 1941), women trade their high-education status for the high-caste status of their husbands. If Indian women engage in this status exchange, it implies that with increasing education, social status does not disappear. Rather, preferences among women shift from one hypergamy to another (here, educational hypergamy to caste hypergamy). This trend among women to use educational

attainment to their advantage in marriage is an emerging aspect of Indian marriages that remains insufficiently researched and is thus the primary focus of this study.

While this research provides evidence to indicate that status exchanges exist in the Indian marriage market and can explain the rising educational hypogamy, it also raises two key concerns: that education is not the career pathway for many Indian women and that caste inequalities continue to drive behavior. It seems that increasing education levels, which are generally expected to create financial opportunities for women, serve as a means to achieve the desired higher socioeconomic status in marriage. This preference for marital status over a career among highly educated Indian women may partially explain their declining workforce participation, which is an ongoing debate (Neff, Sen, and Kling 2012; Das et al. 2015; Klasen and Pieters 2015; Dubey, Olsen, and Sen 2017; Afridi, Dinkelman, and Mahajan 2018). Another concern is that Indian women give immense importance to the prospective husbands' socioeconomic status, indicating that patriarchal notions continue to flourish and that inequalities by caste continue to grip Indian society. These unexpected outcomes raise concerns about the general understanding of education and its contribution to development in India, particularly among women, and therefore call for more research.

Table 1:   Educational hypogamy by caste groups and caste-based endogamy/exogamy over marriage cohorts

Marriage cohorts	EHypo ST	EHypo SC	EHypo OBC	EHypo general	Caste endogamy	Caste exogamy
1965–1985 (%)	25 (11.52)	25 (11.52)	117 (53.92)	44 (20.28)	2,639 (86.35)	358 (11.71)
1986–1990 (%)	118 (15.84)	113 (15.17)	300 (40.27)	185 (24.83)	5,344 (84.32)	805 (12.70)
1991–1995 (%)	203 (14.64)	187 (13.48)	588 (42.39)	361 (26.03)	7,345 (83.83)	1,159 (13.23)
1996–2000 (%)	313 (15.14)	314 (15.18)	816 (39.46)	513 (24.81)	8,632 (82.08)	1,482 (14.09)
2001–2005 (%)	456 (17.15)	445 (16.74)	1,005 (37.8)	628 (23.62)	9,223 (82.11)	1,579 (14.06)
2006–2010 (%)	578 (16.92)	556 (16.27)	1,353 (39.6)	748 (21.89)	9,560 (82.09)	1,655 (14.21)
2011–2016 (%)	683 (18.01)	644 (16.98)	1,434 (37.82)	809 (21.33)	9,232 (81.79)	1,597 (14.15)

Source: DHS 2015–2016.
Notes: ST refers to scheduled tribes, SC refers to scheduled castes, and OBC refers to other backward classes, in accordance with the terminologies used in the Indian constitution.

2. Theoretical approach and research hypotheses

In developed Western countries, the social construct is such that gender equality has mostly been reached in areas such as educational achievements and economic capacities as individuals and within the family. These modernizing social constructs have often been cited as the prime factors behind educational hypogamy among women in assortative mating literature. For instance, according to the reversed gender gap theory (Esteve, García-Román, and Permanyer 2012; Van Bavel 2012), increasing women's education has resulted in the stock of highly educated women exceeding that of men in European countries. This, in turn, has led to a shift from hypergamy to hypogamy. Furthermore, in the West, rising gender equality in the economic capacity and declining parental intervention in marriage decisions have led to a shift in women's preferences for marital partners, from traditional attributes (such as education and occupation) to nontraditional attributes (such as love, appearance, and compatibility), resulting in an increase in educational hypogamy (Schwartz 2013).

While these theories may explain the rise in educational hypogamy in developed Western societies, they may not be applicable in the case of India primarily because of the dissimilar social constructs. First, although women's education in India has steadily increased over the years, substantial gender inequality remains. Second, due to the patriarchal structure of Indian society and the existing gender inequality, the higher education levels of Indian women are often not concomitant with self-sufficiency and economic independence. To illustrate, studies have found that more highly educated women are often considered 'spoiled brides' (Still 2011) and are more susceptible to intimate partner violence as they threaten the dominance of the patriarch in the household (Weitzman 2014). Third, marriages arranged by the family are still the dominant marital arrangement, and given the patrilocal family system in India (Allendorf 2013; Char, Saavala, and Kulmala 2010), the family has a significant influence on partner choice.

Adding to the limited literature on assortative mating in India, Lin, Desai, and Chen (2020) suggest that the gender-specific education theory offers new evidence to explain the rise in educational hypogamy among Indian women. This theory is based on the understanding that some disciplines, such as the arts, humanities, and social sciences, which have been traditionally considered to be more feminine, are known to have adverse labor market outcomes in comparison to disciplines in science, technology, engineering, and mathematics (STEM), which are typically preferred by men. As a result, men from STEM fields enter the job market much earlier than women, who end up having higher education but fewer job opportunities (England and Li 2006). This may be a key driver of educational hypogamy. This theory has been validated in India, where the authors have shown that educational hypogamy is more likely to occur among women with degrees in fields of study associated with lower economic returns (Lin, Desai, and Chen 2020).

Interestingly, the status-exchange theory, one of the earliest theories offering an explanation for assortative mating in culturally diverse societies, has not been fully used to explore the Indian marriage market. Status-exchange theory suggests that individuals tend to mutually exchange suboptimal characteristics with desirable ones through marriage (Davis 1941). This theory has been validated in many countries in which assortative marriages are characterized by economic and social exchanges (Gullickson 2006; Gullickson and Torche 2014; Schwartz, Zeng, and Xie 2016; Zhou 2016). These exchanges are characteristic features of societies in which, first, the gender gap in education has reduced to a great extent, particularly among women (Esteve, García-Román, and Permanyer 2012; Schwartz, Zeng, and Xie 2016; Qian 2017; Van Bavel, Schwartz, and Esteve 2018), and, second, in societies that are culturally heterogeneous but have rigid social boundaries (Kalmijn and Van Tubergen 2010). India satisfies both these conditions as a culturally heterogamous society by caste, religion, and language and with a continuous increase in education levels among women. Despite the essential conditions for status-exchange mechanisms to operate, status exchanges in the Indian marriage market have been little explored because of the limited availability of relevant data. A recent study shows that educational hypogamy in India is more likely to be observed among women who belong to lower economic status than their in-laws (as measured by the educational attainment of the father and father-in-law) (Lin, Desai, and Chen 2020). In the following section, I explore the possibility that socioeconomic-status exchanges can explain educational hypogamy in India.

2.1 Indian society: The caste system

To understand Indian society, it is important to understand its caste system. The caste system is prevalent among all religions in India and is rooted in Hinduism, the majority religion, which composes approximately 80% of the total population (Religious Census 2011). Historically, the caste system was a hierarchical stratification of occupation and social-behavioral expectations, which were assigned by birth and with boundaries that were patrilineal and uncrossable.[2] Men could not alter their position within this social structure, but for women, change was possible through marriage.

The caste system is widely understood to include four categories. In descending order of hierarchy, the topmost caste is Brahmans (priests and scholars), followed by

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[2] The caste system was characterized by several features (Velassery 2005): first, the hereditary specialization of occupations that were hierarchically superposed, mutually opposed, and resistant to change; second, the aspect of endogamy or marriage within the same caste; third, the restrictions on diet and food habits assigned to each caste; and fourth, the limiting of social interaction between castes. Any violation of these norms usually resulted in excommunication from the family and kin as well as the community (Deshpande 2010).

Kshatriyas (political rulers and warriors), Vaishyas (merchants and traders), and Shudras (untouchable/slaves) (Ghurye 1969; Smith 1994). In post-independence India, the constitution abolished the caste system and reformulated the groups by their economic standing, with the aim of identifying and uplifting the underprivileged sections. The economically well-to-do caste groups were categorized as general castes, less well-to-do caste groups as other backward classes (OBC), the lowest ranking caste groups as scheduled castes (SC), and tribal groups as scheduled tribes (ST). As a result, the uncrossability and patrilineality of caste-based occupations no longer hold true. Recent studies confirm this finding, showing that the correlation between occupation and caste in India is weak (Munshi 2019). However, India's traditional caste groups and subgroups are still easily identifiable by family lineage, place of residence, economic status, and sometimes surnames. Consequently, the influence of the caste hierarchy continues to prevail in social aspects and plays a critical role in the selection of marriage partners.

2.2 Applicability and benefits of status exchange in Indian marriages

Given the high social costs associated with intercaste marriages in India (Banerjee et al. 2013), caste endogamy is still the dominant marital arrangement (Allendorf and Pandian 2016). Several ongoing studies have documented a gradual shift from the practice of traditional arranged marriages to jointly arranged and love marriages (Banerji et al. 2013; Allendorf and Pandian 2016; Sarkar and Rizzi 2020), proving that women have become increasingly involved in their marital decisions and that traditionally tight marital arrangements are loosening. Evidence of status exchanges in intereducational and intercaste marriages has been documented in West Bengal, India (Banerjee et al. 2013). A recent study reveals that women who are more educated than their husbands usually belong to natal families with a lower economic status than that of their in-laws (Lin, Desai, and Chen 2020). These studies indicate that heterogamous and exogamous pairings are more probable when they involve an exchange for or gain in a mutually lacking but desirable characteristic. However, these studies lack the support of a comprehensive caste-based analysis mainly because of the unavailability of accurate and detailed information on couples' caste affiliations, which is now achievable using the couple file from the latest DHS 2015–2016 data.

The initial descriptive analysis from this dataset reveals that an increase in educational hypogamy occurs mostly among women from the lower-caste groups (Table 1). Although the percentages are low, they are increasing over the marriage cohorts. It is not unexpected that women from low castes have an incentive to marry less-educated men of a higher caste. This not only frees the woman from social (caste-based)

discrimination still prevalent in many regions of the country[3] but also allows her and her children to acquire a better status and position in society (Davis 1941). For men, in contrast, the wife's caste is of less importance given that marriage does not change the man's caste. The education level could have a more pronounced influence on the future success of a family. The literature explains that, although education among women is not rewarded economically in India (Kingdon 1998; Bhaumik and Chakrabarty 2008; Agrawal 2011; Chatterjee, Desai, and Vanneman 2018; Kanjilal-Bhaduri and Pastore 2018), educated women are sometimes perceived as better candidates in the marriage market because they are believed to be better able to bring up children and maintain a healthy household than less- or not-educated women (Lin, Desai, and Chen 2020). In addition, partnering down by caste allows men to enlarge their selection group, thus improving their prospects of having an attractive wife or securing a higher dowry/groom price (Davis 1941). Thus, it is evident that while this influence has been underresearched in the Indian demographic literature, status exchanges in culturally diverse India may explain rising educational hypogamy.

The above discussion shows that marriage is one of the most important economic decisions that Indian women make in their lives (Banerjee et al. 2013). Accordingly, instead of using her education to seek employment or financial independence, a more highly educated Indian woman may find it more desirable to trade her higher education for the higher-caste status of the potential husband. Hence, for my first hypothesis, I expect that educational hypogamy is positively related to caste hypergamy among women from lower-caste groups.

The occupational status or economic mobility of the prospective husband is also a factor in the educational hypogamy among Indian women. Again, as the choice of the husband can be the single most important economic decision a woman makes (Banerjee et al. 2013), the future husband's occupation must be considered for many reasons. First, the idea of the male breadwinner is dominant in Indian societies (Bhatnagar and Rajadhyaksha 2001; Desai and Banerji 2008). Although gender equality in occupational levels has been reached in some developed societies, this is not the case in India because economic stability and employment affect marriageability more for men than for women in the Indian marriage market (Banerjee 1999). Second, in almost every society, men's marriageability is positively related to better employment status, a classic example being

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[3] In certain regions, such as Rajasthan, Uttar Pradesh, Bihar, and others, the caste-based prejudices are exceptionally high. It is not uncommon to have villages and communities of a particular caste living together. Similarly, in rural schools, children are often discriminated based on castes: The lower-castes students are expected to sit at the end of the classroom and on the floor, whereas higher-caste students are given the front seats, tables, and chairs; lower-caste students are made to clean toilets; and midday meals cooked by SC or ST cooks are not eaten by higher-caste children, among many other examples (Paliwal 2021). Several studies show that women from the SC and ST groups often experience the highest burden of social exclusion, poverty, the lowest maternal health care (Kumar and Gupta 2015), a lack of occupational mobility across generations, and high fertility outcomes (Banerji 2012).

the term 'marriageable male,' coined by William Julius Wilson in his book *The Truly Disadvantaged* (Wilson 1987). In India, when dowries are paid, the payment to the groom is calculated according to his occupational status (Chiplunkar and Weaver 2021). Finally, the husband's occupation provides the couple with a sense of financial security. Clearly, the occupation of the potential husband is important for marriageability in patriarchal India. Therefore, when choosing a husband, a better-educated, high-caste woman (who has less to gain from a change in caste) may exchange her higher education for his better job. This is reflected in my second hypothesis, which I expand on below.

Reiterating the aforementioned gender-specific education theory – which states that women prefer more 'feminine disciplines' of education (non-STEM subjects) that require more time to achieve, create a late entry to the job market, and have low economic returns (Lin, Desai, and Chen 2020) – women would prefer a financially secure or better employed husband at the time of marriage. Therefore, possibly, a wife is more highly educated but lower in occupational status than her husband. This could be especially relevant for women belonging to higher-caste groups, who aspire to benefit from marriage by exchanging their higher education status in return for the higher occupational status of their husbands. Therefore, in my second hypothesis, I expect that in the sample of educational hypogamy, the likelihood of occupational hypergamy is higher among women who belong to higher castes.

The age at marriage could also influence this exchange. The literature has consistently demonstrated that marrying at higher ages results in positive impacts on marital arrangements, higher returns to education, lower fertility, better child health, and greater bargaining power and decision-making among Indian women (Caldwell, Reddy, and Caldwell 1983; Desai and Andrist 2010; Chari et al. 2017). Marrying at later ages may also lead to higher bargaining power in marital decisions, especially regarding status exchanges. Therefore, for my third hypothesis, I expect that in educational hypogamy, the likelihood of both caste and occupational hypergamy increases with the age at marriage. I expect that women who marry when they are older are more likely to have made socioeconomic trade-offs against educational hypogamy than those who marry younger.

The primary objective of this study is to explore why women in India marry men who are less educated than they are. To do so, I apply the status-exchange theory in Indian marriages by examining exchanges between education and caste (for social mobility) and/or occupation (for economic mobility). Special focus is given to the caste of the respondent and her husband, thanks to the first-time availability of couple caste information in the DHS 2015–2016 data, which enables a detailed analysis of the marital bargaining at play in the Indian marriage market.

3. Data, variables, and methods

This analysis uses secondary data from the couple file of the DHS 2015–2016, the most recent and largest sample survey conducted in the country under the stewardship of the Ministry of Health and Family Welfare and coordinated by the International Institute for Population Sciences in Mumbai. In addition to containing information collected from India's 29 states, the dataset also includes survey responses from all 7 union territories for the first time and provides estimates of most indicators at the district level for all 640 districts in the country as per the 2011 census. Almost 568,200 households, 625,014 women, 93,065 men, and 265,653 children (aged < 5 years) were interviewed. This dataset provides information on the key population, marriage, health, and nutrition indicators, including the prevalence of HIV and domestic violence. The couple file of the dataset is of particular importance to this study because it provides information on 63,696 eligible women aged 15 to 49 years and their respective husbands. All questions asked of the women were also asked of their husbands, thus capturing unique information from both members of the couple for the first time.

In this analysis, the primary objectives are to analyze the determinants of educational hypogamy by caste and occupation. Thus, the dependent variable educational hypogamy is dichotomous, capturing a value of 1 if the wife is more educated than her husband and 0 otherwise. The main explanatory variables are caste and occupation. Caste affiliations for both members of the couples are available in the dataset, categorized as scheduled tribe (ST), scheduled caste (SC), other backward classes (OBC), and general castes (GEN), in increasing order of hierarchy. A variable 'caste assortment' created for the analysis takes value 1 for caste homogamy if both the wife and her husband share the same caste groups, value 2 for caste hypergamy if the husband belongs to a higher-caste group than the wife, and value 3 for caste hypogamy if the husband belongs to a lower-caste group than the wife. Another variable, 'wife–husband caste pairs,' captures all the 16 combinations of wife–husband caste pairs (for homogamous pairs: ST-ST, SC-SC, OBC-OBC, and GEN-GEN; for hypergamous pairs: ST-SC, ST-OBC, ST-GEN, SC-OBC, SC-GEN, and OBC-GEN; for hypogamous pairs: SC-ST, OBC-SC, OBC-ST, GEN-OBC, GEN-SC, and GEN-ST). Occupation-related information for both members of the couple is also available in the dataset. Using the Indian NCO-1968 classification, workers are divided into seven occupational classes in decreasing order of hierarchy: professional/technical/managerial, clerical, sales, agricultural, services/household/ domestic, manual/skilled/unskilled, and not in workforce/no occupation. This variable is used to create the new variable 'occupation assortment,' which takes value 1 for occupation homogamy, 2 for occupation hypergamy, and 3 for occupation hypogamy. Other variables of interest in the analysis are religious groups (Hindu; Muslim; Christian,

Sikh, or Buddhist; and others), age at marriage, and marriage cohorts (before 1986, 1986–1990, 1991–1995, 1996–2000, 2001–2005, 2006–2010, and 2011–2016).

The analytical strategy begins with descriptive analysis, followed by multivariate models. The initial analysis focuses on trends of mean years of education, age at marriage, intercaste and interoccupation over marriage cohorts, and associations between education-caste and education-occupation assortments. The associations are then confirmed using stepwise binary logistic regression models. To investigate the determinants of educational hypogamy, it is essential to restrict the independent variables to premarriage information to understand causality. Because it is not uncommon among women in India to continue education after marriage (Dutta 2016), it is important to select a sample of women who have completed their education before marriage. A simple strategy to achieve this is to restrict the sample to women who married after 19 years of age.[4] Independent variables selected for the analysis are limited to premarriage information, such as caste, occupation, religion, age at marriage, and marriage cohorts. Importantly, in India, women rarely start working postmarriage mostly because of the additional responsibilities of family and childbearing, gender role expectations in the broad patriarchal structure, and low economic returns (Buddhapriya 2009; Barhate et al. 2021). Therefore, the use of occupational status at the time of the survey for women is a good proxy for occupational status at the time of marriage. The study sample finally comprises approximately 19,922 observations after subsequent filtration of the sample, according to the needs of the study. Approximately 39,964 women who married below 20 years of age were removed, 1,865 women had missing information on intercaste marriage, 1,173 women had missing information on occupation, and 772 women had

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[4] India is a country in which the majority of the marriages are still arranged by family and kin (almost 77% according to the recent IHDS 2011-12 data) and are usually caste homogamous (Allendorf and Pandian 2016). Recent studies have proven that the probabilities of arranged marriages decrease considerably with increasing age at marriage (Sarkar and Rizzi 2020). In an important study by Desai and Andrist (2010, published in *Demography*), the authors limited their study sample to women who married after 25 years of age. They argue that women married at a young age are more likely to be docile and unable to make marriage-related decisions. Especially because this research explores marital bargains and caste heterogamy, if all age groups are included in this study, it will risk overrepresenting (1) women who have had arranged marriages, (2) caste homogamy, and (3) rural marriages, where age at marriage is lower than in urban areas and marriages are arranged. In addition to these issues, child marriage is still not a rare event in India, and often these young married girls continue to live with their natal family even after marriage until they reach a certain age and maturity (the Gauna tradition). Therefore, although their status is married, technically, they are not. These girls who marry before they reach 19 years of age may partner up or down by education at the time of marriage, but because they are young, it is possible that they (or their husbands) will continue to pursue education after marriage (Dutta 2016). In cases like these, education information collected at the time of survey is not the same as information at the time of marriage. Therefore, one cannot ensure whether participants in this age group are partnering up or down by education at the time of marriage. Including this population would lead to erroneous calculations for education hypogamy. To reduce this error, only information from women who married after 19 years of age is considered to ensure that women in the study sample have completed their education before marriage. In this way, both causal inferences as well as bias in sample selections can be reduced.

missing information on the year of marriage. Because the DHS data follow a multistage sampling design, the results can be considered representative only after applying the appropriate weights. Because population sizes by caste, occupation, and education distribution vary substantially, all regression models are weighted using sampling weights for women.

4. Results

4.1 Descriptive results

In this section, I begin by examining the trends of education levels, ages at marriage, intercaste and interoccupation marriages among cases of educational hypogamy, and other marriages over marriage cohorts. As shown in Figure 2a, the mean years of completed education among women are consistently higher for cases of educational hypogamy than for other marriages. Even though this gap has decreased over marriage cohorts, an average of approximately four years of education separated the two groups in the last marriage cohort (2011–2016). The mean age at marriage is consistently higher among women who have engaged in educational hypogamy than among those in other marriages, with age differences of several months to one year (Figure 2b).

In socioeconomic terms, measured by caste and occupation, the percentages of intercaste and interoccupation marriages are consistently higher over the period among cases of educational hypogamy than other marriages (Figures 2c and 2d). Although the differences in percentages of intercaste marriages narrowed down after 2001, the 2011–2016 marriage cohort recorded an increase in intercaste marriages for educational hypogamy and a first-time decrease in educational homogamous and hypergamous marriages. Thus, educational hypogamy seems to be associated with women who are socioeconomically 'better-off' (i.e., who are highly educated, who marry at higher ages, and who had exogamous marriages both by caste and/or occupation). In the following section, I go a step further in my examination of socioeconomic associations by exploring the marrying-up and marrying-down aspects of educational hypogamy.

Figure 2: **Trends over marriage cohorts of educational hypogamy among women by (a) single year education, (b) mean age at marriage, (c) intercaste marriage, and (d) interoccupation marriage**
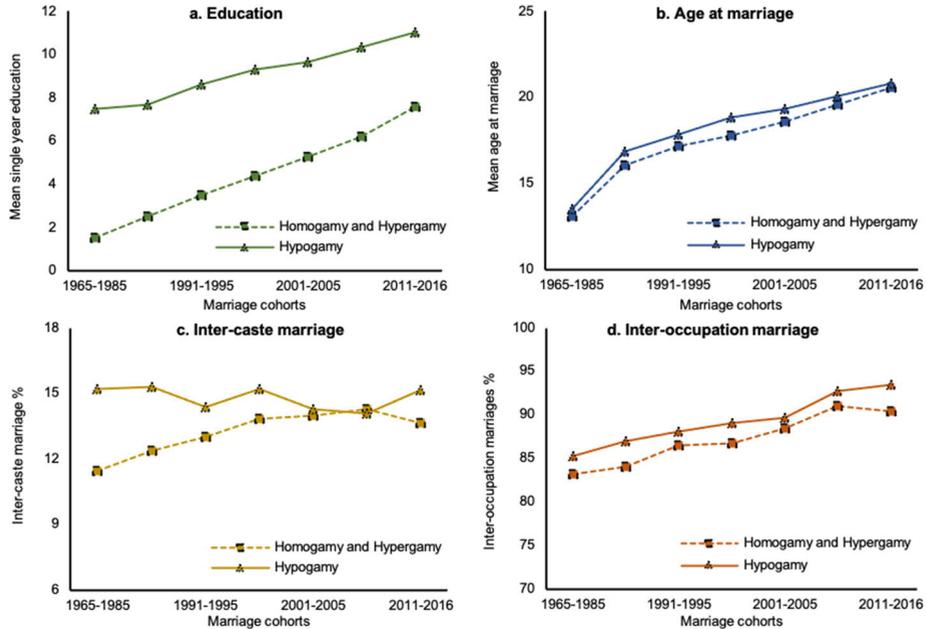
Source: DHS 2015–2016.

Figure 3 shows all three combinations of education hypogamy with caste assortations (same-caste husband, higher-caste husband, and lower-caste husband). Of these combinations, caste homogamy is the dominant marriage pattern, at approximately 84%, among all marriage cohorts (Figure 3a). Except for the dominant combination with caste homogamy, it is only the combination of educational hypogamy with caste hypergamy (Figure 2b) that shows a positive trend. Even when all nine combinations of education and caste assortations are considered (see Appendix, Figure A-2), the combination of educational hypogamy with caste hypergamy still shows the highest positive trend. Thus, educational hypogamy seems to be positively related to caste hypergamy. More precisely, from older to newer marriage cohorts, women seem to be increasingly marrying down in terms of education to marry up into the caste status of their husbands.

Figure 3:   **Scatter chart showing associations over marriage cohorts between (a) education hypogamy and caste homogamy, (b) education hypogamy and caste hypergamy, and (c) education hypogamy and caste hypogamy**
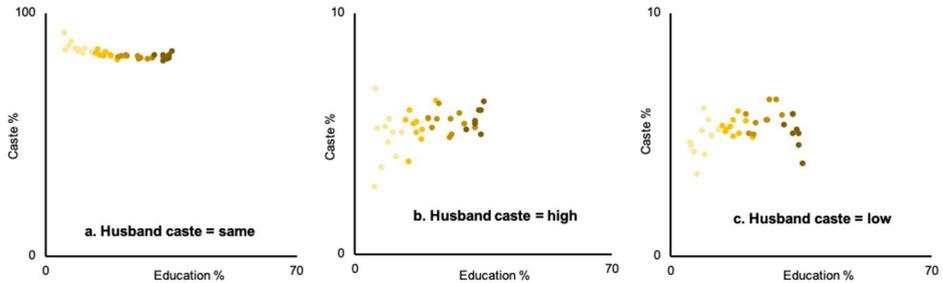
*Note*s: Each dot represents the marriage cohorts (MC). ○ MCs 1980–1989; ◌ MCs 1990–1999; ● MCs 2000–2009; ● MCs 2010–2016.

Similar to what is shown in Figure 3, for all three combinations of education hypogamy with occupation assortations, the highest positive trend is found in the marriage cohorts that combine education hypogamy and occupation hypergamy (Figure 4b). This is also the highest positive trend for all nine combinations of education and occupation assortations (see Appendix, Figure A-3). These descriptive findings indicate the possibility that a trade-off may exist between education and socioeconomic status, as defined by caste and occupation in India.

Figure 4: **Scatter chart showing associations over marriage cohorts between (a) education hypogamy and occupation homogamy, (b) education hypogamy and occupation hypergamy, and (c) education hypogamy and occupation hypogamy**
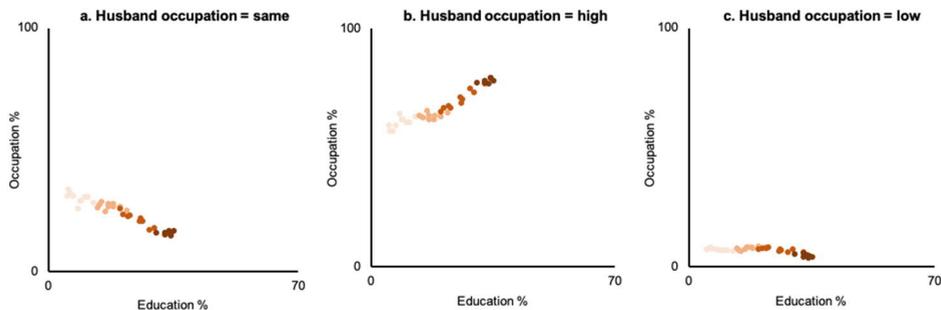
Source: DHS 2015–2016.

*Note*s: Each dot represents the marriage cohort (MC). ○ MCs 1980–1989; ○ MCs 1990–1999; ● MCs 2000–2009; ● MCs 2010–2016.

4.2 Multivariate analysis results: Education and caste

To confirm the socioeconomic associations at the individual level, I use binary logistic regression models (Figure 5; for a detailed model, see Appendix, Table A-4). This part of the analysis seeks to explore the first hypothesis to determine whether marrying up by caste status is an important determinant of educational hypogamy. Therefore, in Model 1 of Figure 5, I regress educational hypogamy with caste assortment groups (caste homo/hyper/hypo) while controlling for other independent variables, such as marriage cohort, religion, and age at marriage. The odds for educational hypogamy are highest when the marriage represents a caste hypergamy (OR = 1.26). This implies that women who are marrying low in terms of education are 1.3 times more likely to trade their higher education for the higher-caste status of the husband. This finding partially confirms the first hypothesis, which states that the exchange in status between education and caste is involved. However, this result does not confirm which social or caste group seeks this exchange.

Figure 5: **Binary logistic regression models displaying odds ratios for educational hypogamy (weighted sample)**
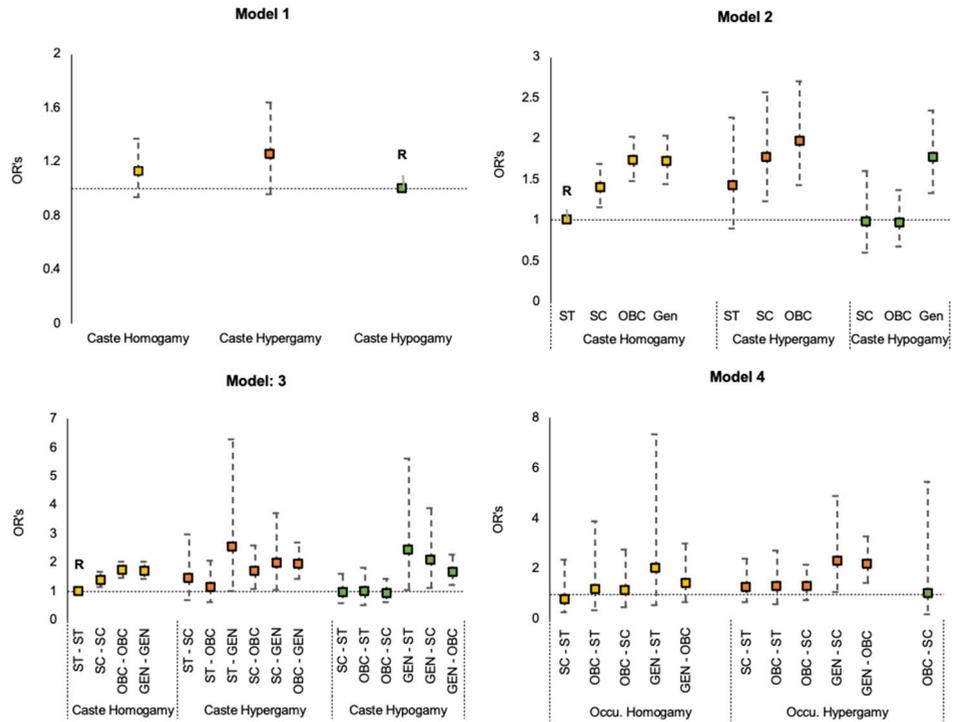
Source: DHS 2015–2016 data.
*Note*s: The full model is presented in Appendix Table A-4. Dependent variable: 1 = educational hypogamy, 0 = other marriages. Model 4 shows the ORs of only caste-hypogamous pairs with a standard error of less than 2.5.

In the next step of the analysis, I go a step further to check this exchange by the wife's caste group. In Model 2 of Figure 5, of all caste combinations, the highest odds for educational hypogamy are found among women belonging to OBC (OR = 1.97), followed by SC (OR = 1.78) castes who have married up to gain the caste status of their husbands. Caste homogamy is the next preferred marriage across all castes, and interestingly, the odds that marriages will be caste homogamous increase by the rank of the caste. Caste hypogamy remains the lowest in preference for educational hypogamy. To gather more detailed information on this exchange, it is also possible to check the wife–husband caste pair. Therefore, in Model 3, the highest likelihood of educational hypogamy is found among caste hypergamous marriages. Women belonging to ST who

marry up to general caste husbands are most likely (OR = 2.54) to have traded their education for the caste status of their future husband, followed by SC women who marry up with general caste husbands (OR = 2.00), and OBC women who marry up with general caste husbands (OR = 1.97). This finding also reveals that the propensity to marry to the highest-ranked caste – that is, the general caste – is the highest among all lower-caste women who are more highly educated and thus qualifying for an exchange of statuses. The likelihood to marry within the same caste is high among all caste groups, and the likelihood to marry low by the husband's caste is lowest among all castes (in line with Model 2) except the general caste women. Thus, the findings from Models 1, 2, and 3 confirm the first hypothesis: that educational hypogamy is positively related to caste hypergamy among women from lower-caste groups, especially among SC, ST, and OBC women, marrying general caste husbands.

4.3 Multivariate analysis results: Education, caste, and occupation

The above findings show that status exchange exists in Indian marriages. This is especially true in cases of marriages in which both partners lack characteristics that could be gained through marriage. For women belonging to lower-caste groups, exchange is more feasible if they are more highly educated than their husbands. However, women belonging to higher-caste groups, such as the general caste, have no incentive to seek caste exchanges as they belong to the highest rank in the caste hierarchy. For them, only two possibilities exist: caste homogamy and hypogamy. While homogamy is the most preferred among all caste groups, the high odds of caste hypogamy among the general caste leave one curious.

To illustrate the second hypothesis, which is to determine whether an exchange in status by education and occupation is involved among higher-caste (general) women, I proceed to analyze Model 4 of Figure 5, for which I control wife–husband caste pairs with occupation assortment groups. When combining caste pairs with occupational assortments, the odds ratios reveal interesting results, especially for women who marry down by caste. General caste women who marry down by education and caste actually marry up by occupation (ORs = GEN-SC: 2.30; GEN-OBC: 2.18). This finding confirms the likelihood of status exchange by occupation and not by caste among women who already have high-caste/high-social status. This confirms the second hypothesis, which is to establish an exchange in status by education and occupation among higher-caste women. Other caste-hypogamous pairs, which, according to Model 3, do not exhibit high odds for educational hypogamy, show high odds for this in Model 4 when educational hypogamy is combined with occupation hypergamy (ORs = SC-ST: 1.27; OBC-ST: 1.30;

OBC-SC: 1.29). These results further demonstrate that other high-caste women marry down by education and caste only when the husbands have better occupations. This indicates that better occupation or economic mobility of husbands becomes an incentive for higher-caste women, who have little or nothing to gain from social mobility, to engage in educational hypogamy. This finding validates the second hypothesis that in the sample involving hypogamy, the likelihood of occupational hypergamy is higher among women who belong to higher castes.

4.4 Multivariate analysis results: Other independent variables

Among the other independent variables controlled for in the models, Christian, Sikh, and Buddhist women seem more likely to participate in educational hypogamy than all other religious groups. The odds remain nearly the same in all the models. I also find that women marrying at a higher age (above 25 years) are slightly more likely to marry less-educated husbands (OR = 1.05) than women who marry between 20 and 25 years of age. The odds decrease slightly when occupational assortations are added to the models (OR = 1.04). This finding confirms the third hypothesis, which states that in educational hypogamy, the likelihood of both caste and occupational hypergamy increases with increasing age at marriage. In the marital cohort, the likelihood of engaging in educational hypogamy increases over time.

4.5 Robustness check

To check the robustness of my findings, I distinguish between three types of educational assortations in a multinomial regression model (see Appendix, Table A-5). I contrast education hypogamy and hypergamy with homogamy, which is the reference category. Notably, the results are consistent with those previously obtained for hypogamy; the relative risk ratios for educational hypogamy are higher when it also results in marrying up to achieve the caste of the husband. Thus, among Indian women, marrying a man from a higher caste is the most preferred outcome of educational hypogamy. The results also confirm that the increase in educational hypogamy over the marriage cohorts can be substantially explained by a rise in intercaste marriages (relative risk ratios are higher for marriage cohorts in Model 2 than in Model 1 in the Appendix, Table A-5).

5. Conclusion

Reversed gender gaps in Europe and the United States as a result of higher education among women has led to increasing educational hypogamy. This change is likely to have profound consequences for demographic and economic behaviors among couples in these countries with respect to reversed gender roles in household chores, parenting roles, economic roles, changing power dynamics between couples, and many others. In India, rising educational hypogamy is not a consequence of reversed gender gaps because women are still the less-educated gender, although the gaps have steadily decreased from 25% in 1961 to 17% in 2011. Thus, instead of a shift from hypergamy to homogamy, which is generally expected when gender gaps start narrowing, India is experiencing a shift from hypergamy to hypogamy. This aspect has been little explored so far in the Indian context, primarily due to the prior unavailability of data and information on marital arrangements. Thus, it remains largely unexplained. Based on recent DHS 2015–2016 data, which for the first time captured unique information from 63,696 couples, this study provides an acceptable rationale for the rising educational hypogamy among Indian women by applying status-exchange mechanisms (i.e., the theory used to explain heterogamous couplings in other countries). Thus, this study provides a fine-grained analysis of educational hypogamy by combining several characteristics of the partners, particularly caste and occupation, to account for socioeconomic exchanges.

Furthermore, this study verifies that although most marriages in India are caste endogamous, substantial marital bargaining is also based on education, caste, and occupation. Education is exchanged for social and economic advantages to benefit both parties, and the likelihood that this exchange is made is considerably affected by the caste groups to which the women and their prospective husbands belong. This analysis shows that women, particularly low-caste women (ST, SC, and OBC), marry men who are less educated but of a higher caste than themselves (especially general caste husbands). This finding confirms the first hypothesis. Further analysis reveals that the preference to rise by occupation is important among higher-caste women (especially the general caste) who marry men of lower castes and lower education than themselves. This finding confirms the second hypothesis. With the evidence provided here, this study confirms that the status-exchange theory applies to marriage in India, and this explains the rising cases of educational hypogamy among women in India.

The findings demonstrate that these status exchanges result in intercaste marriages, thus diffusing ethnic boundaries in India to a great extent. In addition, women in marriages in which they are the more highly educated partner may increase their sense of empowerment and autonomy in household decision-making and other aspects of home and social life. Thus, we may expect to see, as a consequence of increased educational

hypogamy, a change in power dynamics within households in India and a shift from traditional male-dominated to modern gender-neutral relations.

It is worth noting that the findings also raise some important socioeconomic concerns. First, it seems that rising education levels create few financial opportunities among women in India in contrast to what one might expect. Rather, education may be perceived as a means to achieve the desired higher status in the marriage market. Second, the desire to marry up by the caste status of the husband also reveals that the relative importance given to caste in India has not disappeared and that it continues to maintain a stronghold in Indian society, especially regarding marriage. Thus, the changes are not entirely modern, and there is still complexity in disentangling these aspects in Indian society. There is clearly a need for future in-depth qualitative studies to explore marital adjustments as well as conjugal and familial relationships among couples engaged in heterogamous marriages in India.

The present study has certain limitations. First, it is difficult to conclude whether the marital bargains described above are made by the woman herself or by her family. The status exchange could be an outcome of the arranged-marriage system that dominates Indian marriages. This aspect could not be identified in the dataset used because it lacked information on marital arrangements. Another aspect that could not be examined using this dataset is the possibility that attitudinal preferences such as beauty, intelligence, or compatibility could explain educational hypogamy among women in India. A final limitation of this study is the sample selection. Although the selected sample can provide more accurate calculations with reference to causal inferences, like most nuptiality studies, it is limited to current information at the time of the survey rather than information at the time of marriage. Thus, future surveys and projects should be designed to collect information both at the time of the survey and at the time of marriage. Despite these limitations, this study solves the puzzle of rising educational hypogamy in India using the theory of status exchange while also revealing a new dimension of Indian marriages – marital bargains – that is still largely unexplored in India.

6. Acknowledgments

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Appendix

Table A-1:   Sample characteristics

All variables		Educational hypogamy		Total
		Freq.	%	
Caste groups (respondent)	ST	2,398	20.38	11,386
	SC	2,305	20.24	11,767
	OBC	5,643	22.76	24,792
	General	3,298	26.02	12,676
Caste groups (husband)	ST	2,384	20.28	11,755
	SC	2,326	20.45	11,373
	OBC	5,613	22.67	24,765
	General	3,251	26.15	12,433
Caste assortment	Homogamy	11,736	22.31	52,616
	Hypergamy	820	23.69	3,461
	Hypogamy	812	23.47	3,460
Wife–husband caste pairs	ST-ST (homo)	2,145	20.19	10,626
	SC- SC (homo)	1,938	20.16	9,611
	OBC-OBC (homo)	4,937	22.50	21,939
	GEN-GEN (homo)	2,716	26.02	10,440
	ST-SC (hyper)	110	20.68	532
	ST-OBC (hyper)	93	24.16	385
	ST-GEN (hyper)	32	24.06	133
	SC-OBC (hyper)	169	19.88	850
	SC-GEN (hyper)	63	24.32	259
	OBC-GEN (hyper)	353	27.11	1,302
	SC-ST (hypo)	103	18.36	561
	OBC-ST (hypo)	74	23.20	319
	OBC-SC (hypo)	176	20.66	852
	GEN-ST (hypo)	45	26.95	167
	GEN-SC (hypo)	75	26.13	287
	GEN-OBC (hypo)	339	26.61	1,274

Table A-1:   (Continued)

All variables		Educational hypogamy		Total
		Freq.	%	
Occupation groups (respondent)	Professional/technical	689	43.72	1,576
	Clerical	78	38.42	203
	Sales	294	30.25	972
	Agricultural	1,722	15.48	11,126
	Service/household	618	29.93	2,065
	Manual: skilled, unskilled	859	21.92	3,919
	Not in work force	9,952	23.06	43,163
Occupation groups (husband)	Professional/technical	820	17.45	4,700
	Clerical	372	23.40	1,590
	Sales	1,890	27.03	6,991
	Agricultural	4,735	19.83	23,876
	Service/household	1,425	25.04	5,692
	Manual: skilled, unskilled	4,464	25.01	17,846
	Not in work force	546	22.20	2,460
Occupation assortment	Homogamy	2,776	19.18	14,474
	Hypergamy	10,070	23.02	43,747
	Hypogamy	1,252	29.10	4,302
Age at marriage	Child marriage	129	8.90	1,449
	Teenage marriage	7,688	19.57	39,276
	Adult marriage	6,468	29.26	22,105
Marriage cohorts	Before 1985	217	7.10	3,056
	1986–1990	745	11.75	6,338
	1991–1995	1,387	15.83	8,762
	1996–2000	2,068	19.66	10,517
	2001–2005	2,659	23.67	11,232
	2006–2010	3,417	29.34	11,646
	2011–2016	3,792	33.60	11,287
Total		14,372	22.56	63,696

Source: Own, computed from DHS 2015–2016 data.

Figure A-2: **Scatter chart showing associations between education and caste assortations over marriage cohorts**
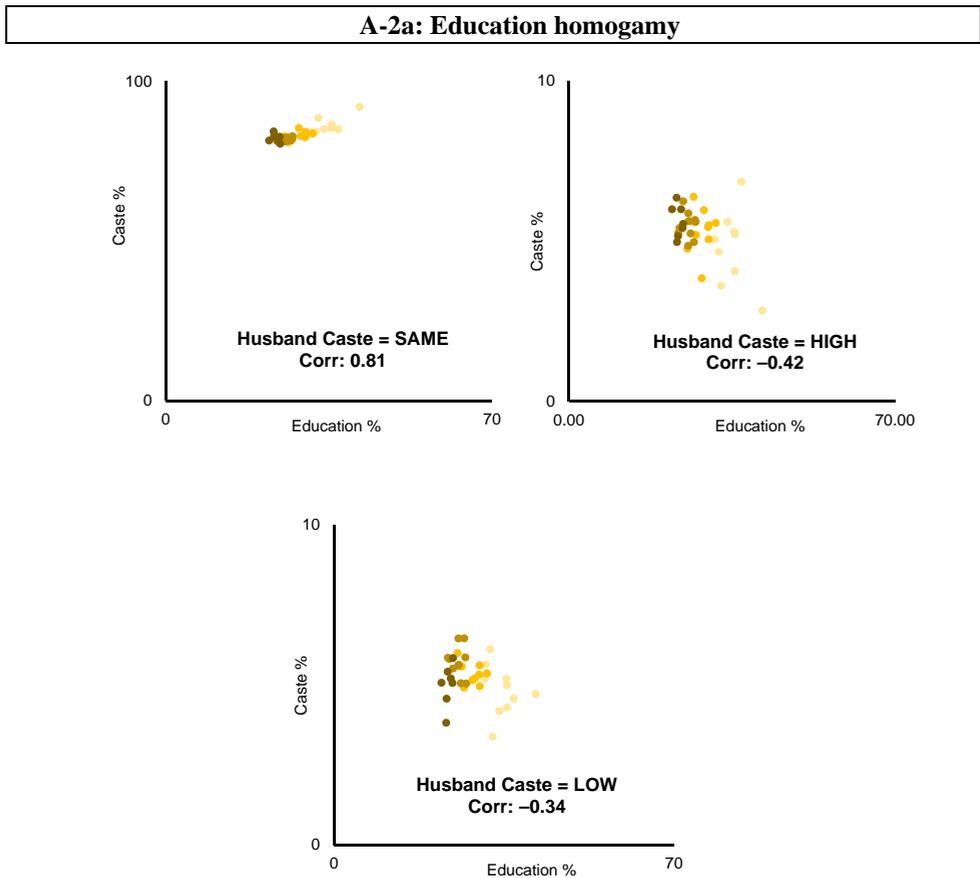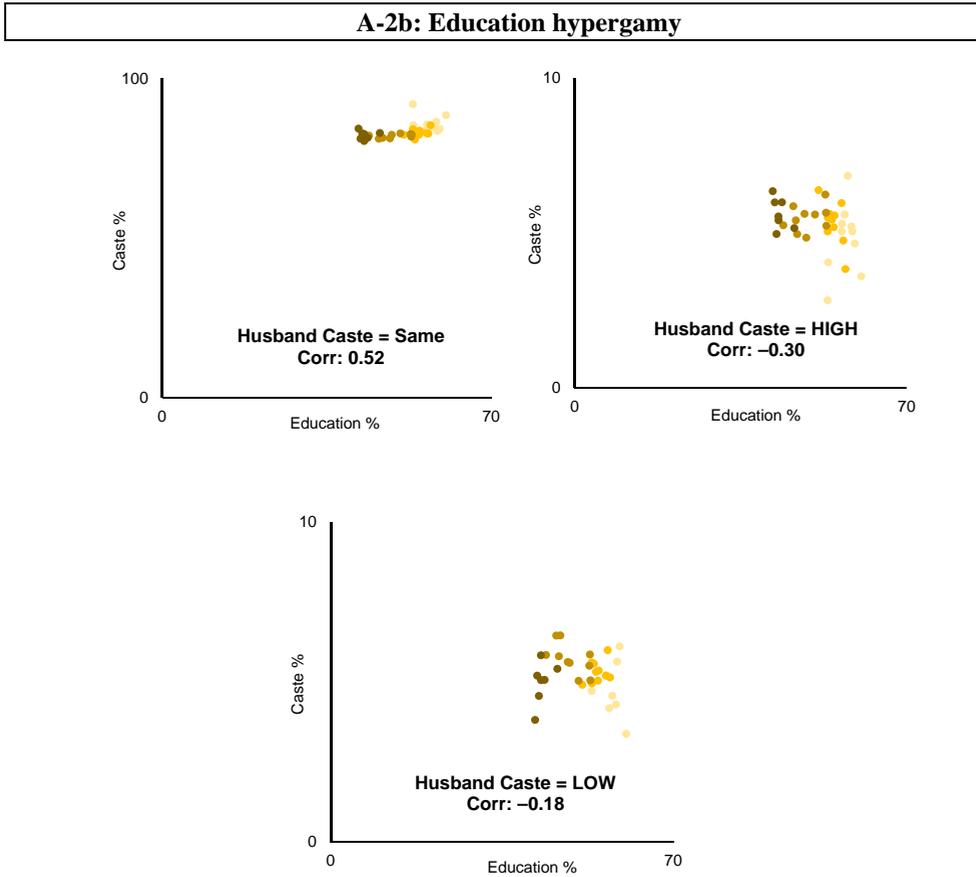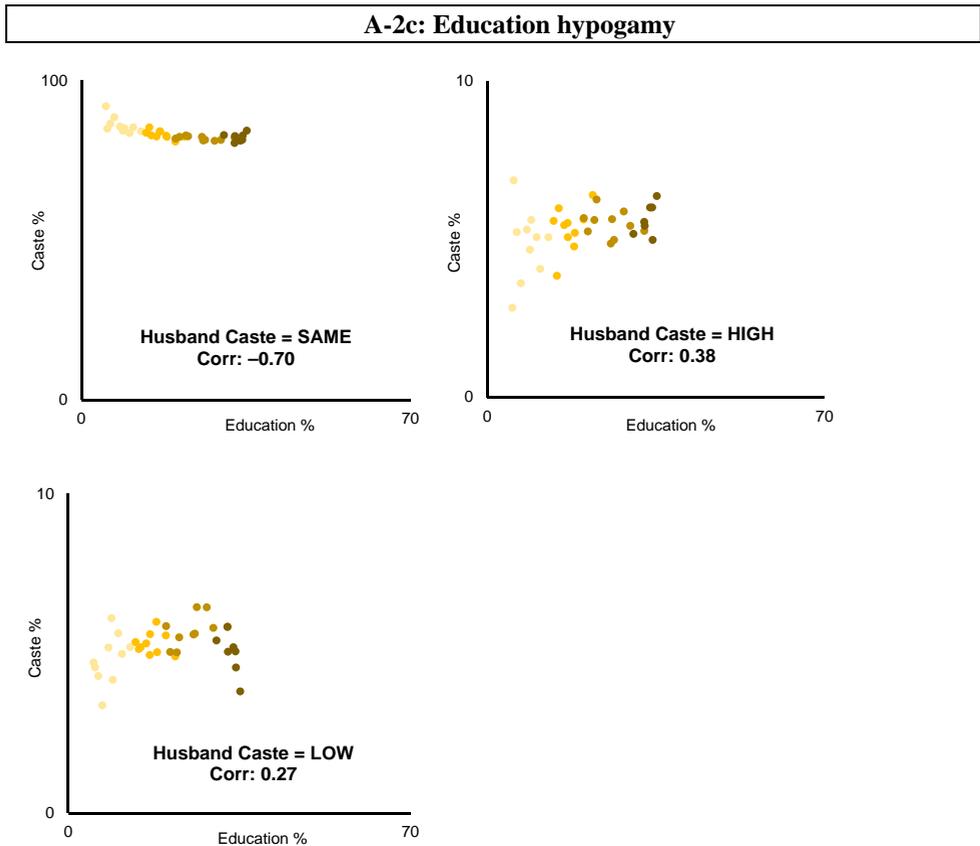
A-2a: Education homogamy

Figure A-2:   (Continued)

A-2b: Education hypergamy

Husband Caste = Same
Corr: 0.52

Husband Caste = HIGH
Corr: –0.30

Husband Caste = LOW
Corr: –0.18

Figure A-2:   (Continued)

A-2c: Education hypogamy

Husband Caste = SAME
Corr: –0.70

Husband Caste = HIGH
Corr: 0.38

Husband Caste = LOW
Corr: 0.27

Source: DHS 2015–2016.

*Note*s: Each dot represents the marriage cohort (MC). ○ MCs 1980–1989; ○ MCs 1990–1999; ○ MCs 2000–2009; ● MCs 2010–2016.

Figure A-3: Scatter chart showing associations between education and occupation assortations over marriage cohorts
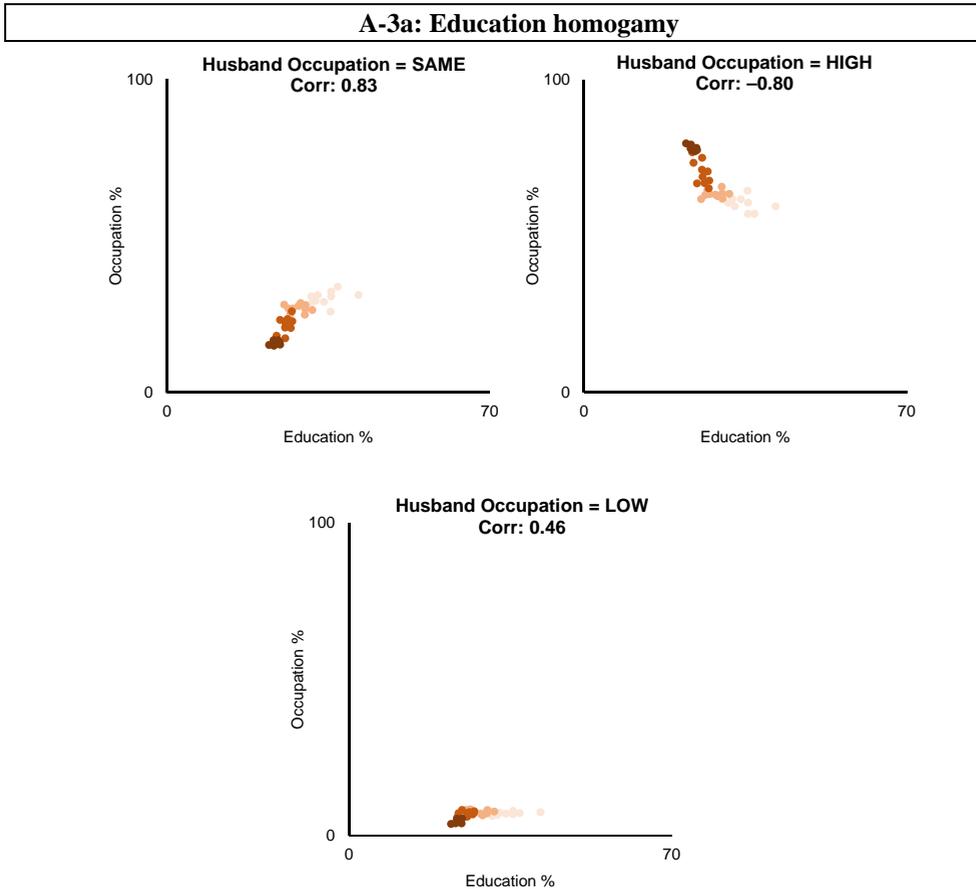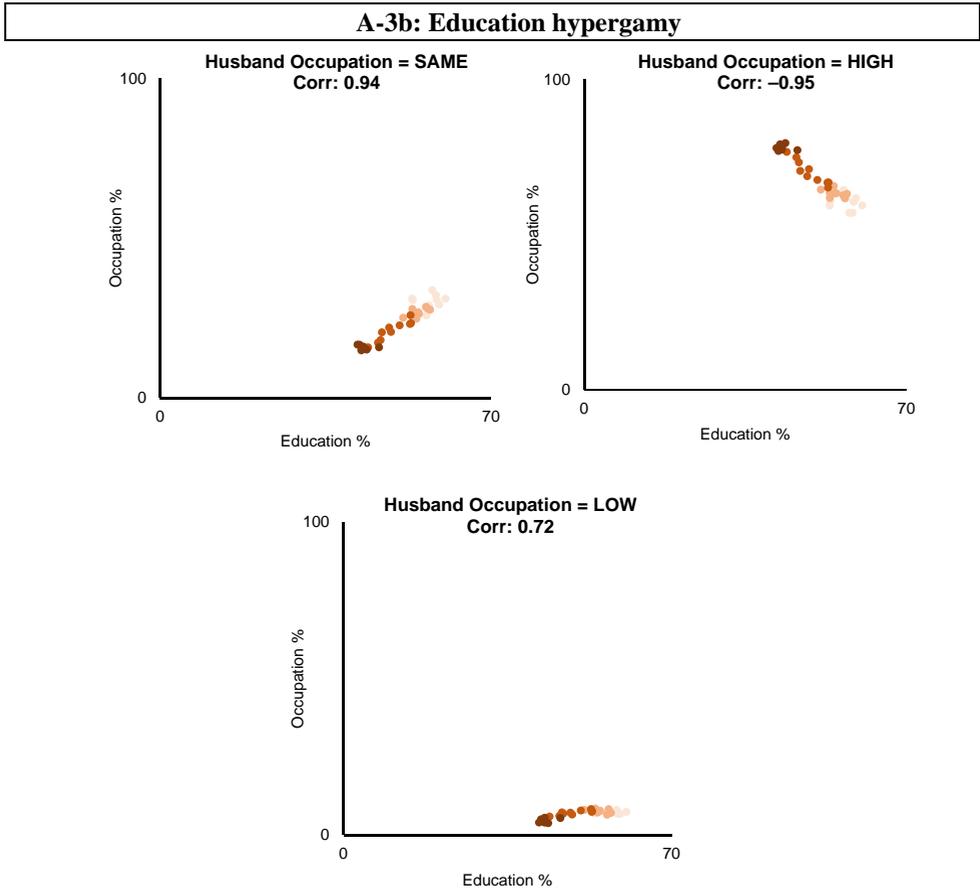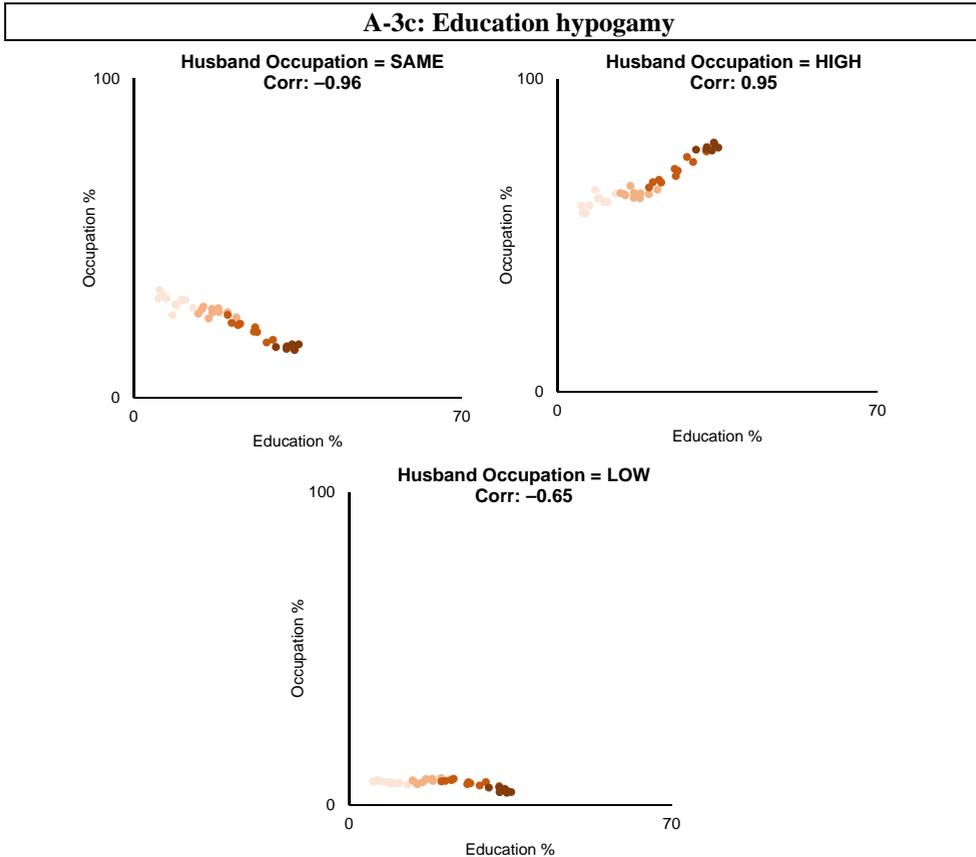
A-3a: Education homogamy

Figure A-3: (Continued)

A-3b: Education hypergamy

Husband Occupation = SAME
Corr: 0.94

Husband Occupation = HIGH
Corr: −0.95

Husband Occupation = LOW
Corr: 0.72

Figure A-3:   (Continued)

A-3c: Education hypogamy

Husband Occupation = SAME
Corr: −0.96

Husband Occupation = HIGH
Corr: 0.95

Husband Occupation = LOW
Corr: −0.65

Source: DHS 2015–2016.

*Note*s: Each dot represents the marriage cohort (MC). ○ MCs 1980–1989 ○ MCs 1990–1999 ● MCs 2000–2009 ● MCs 2010–2016

Table A-4: Regression model for education hypogamy among women in India (weighted sample)

Independent variables		Model 1		Model 2		Model 3		Model 4	
		OR	SE	OR	SE	OR	SE	OR	SE
Caste assortation									
Caste homogamy		1.14	0.11						
Caste hypergamy		1.26	0.17						
Caste hypogamy		R							
Caste assortation by wife's caste									
Homogamy	ST			R					
	SC			1.40	0.13				
	OBC			1.73	0.14				
	General			1.72	0.15				
Hypergamy	ST			1.43	0.34				
	SC			1.78	0.33				
	OBC			1.97	0.32				
Hypogamy	SC			0.99	0.25				
	OBC			0.97	0.17				
	General			1.77	0.25				
Wife–husband caste pairs									
Homogamy	ST-ST					R			
	SC-SC					1.40	0.13		
	OBC-OBC					1.73	0.14		
	GEN-GEN					1.72	0.15		
Hypergamy	ST-SC					1.46	0.53		
	ST-OBC					1.14	0.35		
	ST-GEN					2.54	1.18		
	SC-OBC					1.70	0.38		
	SC-GEN					2.00	0.63		
	OBC-GEN					1.97	0.32		

Table A-4:   (Continued)

Independent variables		Model 1		Model 2		Model 3		Model 4	
		OR	SE	OR	SE	OR	SE	OR	SE
Hypogamy	SC-ST					0.99	0.25		
	OBC-ST					1.00	0.31		
	OBC-SC					0.95	0.20		
	GEN-ST					2.46	1.04		
	GEN-SC					2.11	0.67		
	GEN-OBC					1.67	0.27		
Wife–husband caste and occupation pairs									
Caste homogamy	ST-ST-OccHomo							R	
	ST-ST-OccHyper							1.38	0.23
	ST-ST-OccHypo							2.21	0.52
	SC-SC-OccHomo							1.72	0.32
	SC-SC-OccHyper							1.75	0.28
	SC-SC-OccHypo							3.25	0.80
	OBC-OBC-OccHomo							2.13	0.34
	OBC-OBC-OccHyper							2.11	0.31
	OBC-OBC-OccHypo							5.23	0.99
	GEN-GEN-OccHomo							2.95	0.57
	GEN-GEN-OccHyper							1.99	0.30
	GEN-GEN-OccHypo							5.51	1.33
Caste hypergamy	ST-SC-OccHomo							0.45	0.21
	ST-SC-OccHyper							2.98	1.36
	ST-SC-OccHypo							1.38	1.58
	ST-OBC-OccHomo							2.90	1.64
	ST-OBC-OccHyper							1.02	0.39
	ST-OBC-OccHypo							2.67	2.15
	ST-GEN-OccHomo							3.32	2.48
	ST-GEN-OccHyper							3.07	1.80
	ST-GEN-OccHypo							6.22	8.61

Table A-4:   (Continued)

Independent variables		Model 1		Model 2		Model 3		Model 4	
		OR	SE	OR	SE	OR	SE	OR	SE
Caste hypergamy	SC-OBC-OccHomo							3.23	1.64
	SC-OBC-OccHyper							2.05	0.54
	SC-OBC-OccHypo							1.01	0.85
	SC-GEN-OccHomo							3.63	2.69
	SC-GEN-OccHyper							2.30	0.79
	SC-GEN-OccHypo							2.24	2.51
	OBC-GEN-OccHomo							1.26	0.49
	OBC-GEN-OccHyper							2.45	0.53
	OBC-GEN-OccHypo							14.01	6.21
Caste hypogamy	SC-ST-OccHomo							0.80	0.44
	SC-ST-OccHyper							1.27	0.41
	SC-ST-OccHypo							8.53	7.02
	OBC-ST-OccHomo							1.18	0.72
	OBC-ST-OccHyper							1.30	0.49
	OBC-ST-OccHypo							4.75	4.53
	OBC-SC-OccHomo							1.16	0.52
	OBC-SC-OccHyper							1.29	0.35
	OBC-SC-OccHypo							1.01	0.87
	GEN-ST-OccHomo							2.04	1.33
	GEN-ST-OccHyper							5.09	3.15
	GEN-ST-OccHypo							4.91	6.01
	GEN-SC-OccHomo							7.37	7.07
	GEN-SC-OccHyper							2.30	0.88
	GEN-SC-OccHypo							2.90	2.03
	GEN-OBC-OccHomo							1.42	0.55
	GEN-OBC-OccHyper							2.18	0.46
	GEN-OBC-OccHypo							4.92	2.80

Table A-4:   (Continued)

Independent variables		Model 1		Model 2		Model 3		Model 4	
		OR	SE	OR	SE	OR	SE	OR	SE
Religious groups									
	Hindu	R		R		R		R	
	Muslim	0.97	0.08	0.90	0.07	0.90	0.07	0.92	0.07
	Christian, Sikh, Buddhist	1.34	0.10	1.41	0.11	1.42	0.11	1.41	0.11
	Other	0.89	0.23	1.02	0.27	1.02	0.27	1.04	0.28
Age at marriage									
	20–24 years	R		R		R		R	
	25 years and above	1.05	0.08	1.05	0.08	1.05	0.08	1.04	0.07
Marriage cohort									
	1986–1990	R		R		R		R	
	1991–1995	1.18	0.18	1.16	0.18	1.16	0.18	1.15	0.18
	1996–2000	1.68	0.25	1.65	0.24	1.65	0.24	1.61	0.24
	2001–2005	1.75	0.25	1.73	0.25	1.73	0.25	1.70	0.25
	2006–2010	2.28	0.32	2.26	0.32	2.27	0.32	2.25	0.32
	2011–2016	2.54	0.35	2.55	0.35	2.55	0.35	2.60	0.37
No. of observations		19,922		19,922		19,922		19,922	
Prob > Chi2		0.0000		0.0000		0.0000		0.0000	
Pseudo R2		0.0139		0.0182		0.0184		0.0303	

Source: Author, computed from the DHS 2015–2016 data.
Note: Dependent variable: 1 = educational hypogamy, 0 = other marriages.

Table A-5: **Multinomial regression model for educational assortment among women who married after 2014 (weighted sample)**

Independent variables	Model 1 (rrr) Education hypergamy	Education hypogamy	Model 2 (rrr) Education hypergamy	Education hypogamy
Marriage cohorts				
1965–1985	R	R	R	R
1986–1990	1.09	1.68	1.10	1.71
	(0.07)	(0.21)	(0.08)	(0.22)
1991–1995	1.31	2.43	1.33	2.46
	(0.09)	(0.30)	(0.08)	(0.30)
1996–2000	1.49	3.20	1.51	3.27
	(0.10)	(0.39)	(0.10)	(0.39)
2001–2005	1.37	3.81	1.40	3.94
	(0.10)	(0.46)	(0.10)	(0.48)
2006–2010	1.44	4.93	1.48	5.14
	(0.10)	(0.60)	(0.10)	(0.62)
2011–2016	1.38	5.54	1.43	5.85
	(0.10)	(0.68)	(0.10)	(0.72)
Religion				
Hindu				
	R	R	R	R
Muslim	0.74	0.99	0.68	0.87
	(0.03)	(0.06)	(0.03)	(0.05)
Christian/Sikh/Buddhist	0.77	1.12	0.81	1.20
	(0.05)	(0.08)	(0.06)	(0.09)
Other	0.76	0.96	0.84	1.08
	(0.12)	(0.19)	(0.14)	(0.22)
Age at marriage	0.97	1.03	0.97	1.02
	(0.00)	(0.00)	(0.00)	(0.00)
Wife–husband caste pairs				
ST homo			R	R
			1.34	1.62
SC homo			(0.07)	(0.11)
			1.52	1.92
OBC homo			(0.07)	(0.11)
			1.55	2.18
GEN homo			(0.08)	(0.15)
			1.24	1.5
ST-SC hyper			(0.29)	(0.43)
			1.12	1.53
ST-OBC hyper			(0.20)	(0.34)
			1.19	1.5
ST-GEN hyper			(0.41)	(0.61)
			1.33	1.42
SC-OBC hyper			(0.14)	((0.20)
			1.95	2.20
SC-GEN hyper			(0.46)	(0.61)
			1.72	2.49
OBC-GEN hyper			(0.18)	(0.31)
			0.9	0.94
SC-ST hypo			(0.12)	(0.18)

Table A-5:   (Continued)

Independent variables	Model 1 (rrr) Education hypergamy	Education hypogamy	Model 2 (rrr) Education hypergamy	Education hypogamy
OBC-ST hypo			1.53 (0.27)	1.52 (0.20)
OBC-SC hypo			1.37 (0.15)	1.52 ((0.20)
GEN-ST hypo			1.35 (0.40)	2.18 (0.76)
GEN-SC hypo			1.42 (0.30)	3.05 (0.80)
GEN-OBC hypo			1.48 (0.16)	2.20 (0.28)
Observations	58,719		58,719	
Prob> chi2	0.0000		0.0000	
Pseudo R2	0.0231		0.0263	

Source: DHS 2015–2016 data.
Notes: Reference category: educational homogamy. Standard errors are presented in parenthesis.

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