Female Autonomy and Education of the Subsequent Generation: Evidence from India

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Abstract

The paper uses discrete time duration models and a latent factor structural model to look at the influence of female autonomy on the age at which children enrol in school. Female autonomy is defined as the extent to which a woman can influence decisions taken by the household she lives in. Data come from the third round of the National Family Health Survey for India, 2005/2006. A woman's autonomy is found to positively influence her children's enrolment. This effect is particularly pronounced in the northern states of India, which are characterised both by lower enrolment rates and lower female autonomy.

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1. __Introduction__

The vast literature on children's education identifies a number of factors that influence children's educational inputs and outcomes including, for instance, parent's education, income levels, social norms and regional factors. One factor that has been considered extensively in the context of other child welfare indicators like health and child mortality but has been less extensively considered in the context of education is the importance of the autonomy of women within the household. In this paper, we concentrate on this issue, analysing in particular the impact of female autonomy on children's starting age in school. Analysing this is complicated by the fact that mother's autonomy is a diffuse and vague concept that is very hard to measure. Attempts to use proxies like mother's education, which are often good reflectors of female autonomy, are problematic because mother's education might influence children's education for reasons other than mother's autonomy. Equally, mother's education, as also other measures of autonomy like employment, incomes or assets are all indirect measures that do not necessarily reflect the mother's potential and actual decision-making power within the household. More direct information relating to the economic, decision-making and emotional autonomy of women has, have been provided by the Demographic and Health Surveys (DHS). This has been widely used in the literature, most commonly as indices which provide summary measures of autonomy.[1] Indices of this kind abstract from the variation across the different dimensions and ignore the possibility that some women may have decision-making autonomy but not economic while others might have emotional but not decision-making autonomy and so on. To capture the variations across dimensions and the interrelations between them, we treat female autonomy as a latent unobserved factor in this study.

The present analysis views female autonomy as an exogenous cultural factor[2] and is concerned with whether it influences the age at which children start school. Why might we expect mothers who have autonomy to send children to school earlier than mothers who do not have autonomy? This might be because first, mothers have been found to be altruistic with regard to household consumption as well as other expenditures, to the extent that Haddad and Hoddinott (1991, p.61) concluded that 'there are strong reasons for raising women's

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[1] Generally, this is constructed by adding up answers to various questions pertaining to measure 'autonomy'.
[2] There have been, however, a number of studies endogenising this very concept. Hashemi, Schuler and Ripley (1996), for example, find that the BRAC (Bangladesh Rural Advancement Committee) and Grameen Bank credit programmes significantly improve female empowerment in Bangladesh. Alternatively Sathar and Jejeebhoy (2001) examine whether differences in female autonomy are attributable to the geographical location and the religion of the woman. Additionally Bloom, Wypij and Das Gupta (2001) argued that close ties to kin increase female autonomy.

incomes'. Second, mothers with autonomy are more independent and therefore are likely to be able to network more freely and obtain better information about, for instance, schools. Third, they may be able to act on this information better than mothers who are very dependent because they are able to visit schools, speak with teachers, take children to/from schools, buy books etc. Here, autonomy can be reflected either in the education level of the mother, her involvement in the labour market or even her freedom to interact with the outside world, go shopping, meet friends and relatives, watch television and so on. Finally, female autonomy might be an indicator of the bargaining power of the woman within the household. In this case more autonomous mothers will be better able to affect decisions taken by the household.

Our education variable in this study is the age at which children start primary school. In using this variable, we do not aim to contribute to the very large debate (see Stipek, 2002 for a survey) on the impact that school entry age is considered to have on educational outcomes. Instead, our starting point is the fact that governments are relatively inflexible about recommended school entry ages. Given this recommended starting age, we are interested in whether parents actually enrol children in school when the state recommends that they should. We note that most studies within the literature on education have tended to concentrate on enrolment rates of children in school and their performance, either in terms of scores in tests or in terms of grade completion. Looking at the age at which children start school provides a new and interesting perspective on how to model education. The age at which children enrol does not affect the level at which they enter; so it is possible that there will be children of different ages in each class. This might explain India's high gross enrolment rate[3] of 109%.[4] Furthermore, children's starting school age can be considered an important determinant of children's schooling outcomes. Firstly, simple regressions show a positive relationship between a child's starting school age and the probability of dropping out of school later in his or her schooling career (Table 2). Secondly, in the present sample primary school drop-out and repetition rates are very low (Table 3). The time of school enrolment will consequently have a strong influence on a child's primary school learning outcomes.

Both the way in which the present analysis captures female autonomy and the way in which child school entry age is modelled are innovative. Firstly, our investigation models entry into school in the context of duration analysis. This specification can account for two

[3] Defined as the ratio of "the gross enrolment of children as a proportion of the total children in the relevant age group"
[4] Department of School Education and Literacy, India

issues present in the data. One is the right censoring in the data due to the presence of school-age children who have still not started school in the sample. The other is the fact that children of different ages at the time of interview would have become eligible for school admission at different times posing an initial conditions problem. Secondly, this paper deviates from the previous literature with respect to how the autonomy of the woman is modelled. The customary way of modelling female autonomy is to create an index by aggregating the qualitative answers provided by the woman and to then use this index as one of the explanatory variables in an empirical model (Afridi, 2005, for instance). Contrary to this, the present analysis views female autonomy as a latent factor and analyses its effect on education by adopting a structural equation model (Skrondal and Rabe-Hesketh, 2007). Intuitively the model can be pictured as follows. We will treat female autonomy as an exogenous cultural factor that cannot be observed directly but will be assumed to affect a number of variables which can be captured empirically.[5] Common variation in these measurement variables will be used to infer the properties of the latent factor of female autonomy.

The paper is structured as follows. Section 2 reviews the literature on female autonomy and lays out the educational setting in India. Section 3 describes the data, gives summary statistics and describes how female autonomy is measured. The econometric methodologies adopted are laid out in section (4). Section (5) summarises the results, which are discussed in section (6).

2. **Background:**

The literature on the interrelations between female autonomy and child education is relatively small (Basu and Ray, 2002; Lancaster *et al*, 2006; Afridi, 2006; Durant and Sathar (2000), Smith and Byron (2005) and Aslam (2007)). However, the broader literature on autonomy has much to contribute to our analysis in this paper. We will therefore situate the paper within this broader literature.

2.1. **Female Autonomy:**

Autonomy has been defined variously as 'the ability to influence and control one's environment' (Safilios-Rothschild, 1982), or the 'capacity to obtain information and make decisions about one's private concerns and those of one's intimates' (Dyson and Moore (1983a)). Dixon-Mueller (1978) defines it as 'the degree of access to and control over material and social resources within the family, in the community and in the society at large'. The term autonomy has often been confused with empowerment, though the latter is a process

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[5]   A list of variables are provided in Appendix 1.

and the former is the outcome (at least partly) of the process. While in some instances the difference does not matter, in this paper we are interested in whether the ability of women to make independent decisions influences the decisions they make in relation to child schooling. We are therefore primarily concerned with autonomy. Such autonomy can arise from "the enhancement of assets and capabilities" (Bennett, 2002), from processes that change "the distribution of power both in interpersonal relations and in institutions throughout society" (Stromquist, 1993) and from "a process of acquiring, providing, bestowing the resources and the means or enabling the access to a control over such means and resources" (Lazo, 1993).

The very fuzziness of the concept of female autonomy makes a conceptualisation, which is quantitatively measurable, necessary. Various attempts have been made to measure female autonomy and to make it empirically tractable. These have relied on two broad categories of variables: variables reflecting the characteristics of the woman (her age, education and employment for example) and variables reporting the woman's perception of her status (relating to her freedom to make decisions, associate with others and make choices).

As part of the first category of variables, Abadian (1996) uses female age at marriage, age difference between husband and wife at marriage and female secondary education to measure the impact of female autonomy on fertility. Others have used the educational and economic condition of the woman at marriage[6] as well as variables capturing the woman's labour market experience.[7] Since these variables themselves are accepted to be influenced by 'autonomy' itself, many studies used proxies like the instrumented share of income earned by women (Hoddinott and Haddad, 1995), women's unearned income (Thomas, 1990; Schultz, 1990), their inherited assets (Quisumbing, 1994), their assets at marriage and their current assets. However, the relevance of variables like assets brought to marriage or current assets is context-specific. In India, for instance, these variables are unlikely to be exogenous because dowries are generally given to the bridegroom and are under the control of his family. Quisumbing and Maluccio (1999) therefore argue that 'in societies where the extended family is a key player in intra-household allocation, such as those in South Asia, the characteristics of the extended family may affect intra-household allocation of outcomes' (p.10).

The second approach in measuring women's autonomy has been to use variables that exploit women's responses to questions relating to their position within the household. These studies often concentrate on 4 areas - emotional, decision-making, physical and economic autonomy – so that power is accepted as being multi-dimensional. Emotional autonomy

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[6] Quisumbing and Maluccio (2003) and Thomas, Contreras and Frankenberg (2002) are examples of this.
[7] DeRose (2002) uses continuity of woman's work.

indicates how independent the woman feels from her husband. Decision-making autonomy measures the extent to which the woman is involved in the decision-making process of the household. Physical autonomy denotes how much freedom the woman has to move around and economic autonomy quantifies the woman's control over her own finances. Thus, responses to questions relating to whether women have to ask for permission to go out, whether they make decisions relating to their children (how many to have, whether they should go school, whom they should marry etc.), whether the woman decides what food or other goods to buy, are all part of the information that is used. These studies also include questions on gender preferences for children which are often used for measuring the attitudes of the woman.[8] In using this information, researchers have sometimes concentrated on specific dimensions of autonomy (Vlassoff, 1992; Morgan and Niraula, 1995; Jejeebhoy, 2000), an approach that has been critiqued on the grounds that it is not always clear that people are talking of the same thing. This critique resulted in attempts to obtain summary indices as measures of female autonomy. However, this approach was also criticised on the grounds that it was too simplistic and ignored differences across measures (Agarwala and Lynch, 2006). Two results of their work are particularly relevant to the present analysis. They provide evidence that commonly employed measures of female autonomy are not apt to truly model it. Employing confirmatory factor analysis they find that using summed scales resulted in a significant loss of fit. The major reasons behind this are that these indexes neglect measurement error and do not scale different factors distinctly. Overall, the variability in measures used across studies is such that it is difficult to compare the results.

Jejeebhoy and Sathar (2001) consider women's autonomy in terms of freedom from violence, mobility, control over resources and contribution to decision-making, while Vlassoff (1992) and Morgan and Niraula (1995) consider three dimensions of autonomy (control over resources, decision-making power and mobility). Hogan, Berhanu and Hailemariam (1999) construct an index using questions on who purchases major items, consumption patterns, resource allocation, joining a woman's club, sending children to school and age at which girls should marry. Chavoshi et al (2004) instead use distinct variables on mobility, decision making access, control over resources and freedom from threat to analyse women's reproductive behaviour in Iran.

While the autonomy of women is an outcome in itself, it is also the impact of this autonomy on household welfare that has attracted much attention in the literature. In this context, a large literature has analysed the impact of female autonomy on household

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[8]   Yount, Langsten and Hill (2000) use this approach despite not interpreting it as female autonomy.

expenditure (Hoddinott, 1992; Doss (1996a), Kabeer, 1994, Lundberg et al, 1997; Haddad and Hoddinott, 1991). Afridi (2005), working within this general context, uses data from India to investigate the effect of female empowerment on children's educational outcomes, defined as the deviation of the highest grade attained by the child from the cohort mean. Quisumbing and Maluccio (2003), conversely, use assets and human capital at the time of marriage as indicators of the woman's power in the household to investigate expenditure decisions taken by the household and children's education. They focus on the deviation of each child's completed schooling compared to the average of the relevant age group and on expenditures on education. Durrant and Sathar (2000) analysing the impact of female autonomy in Pakistan find that improving women's status at the individual level enhances child survival and boys' school attendance while community-level empowerment is more important for improving the chances of girls attending school in rural Punjab. Smith and Bryon (2005), on the other hand, studying four South Asian countries - Bangladesh, India, Nepal and Pakistan – find that for South Asia as a whole, improving women's autonomy is effective in reducing gender discrimination against girls. Dharmalingam and Morgan (2004) find that better educated and employed women have very different levels of autonomy and therefore may have different impacts on starting age.

Before we turn to the theoretical framework, it would be useful to consider the autonomy of women in female headed households. The study of female headship as a measure of female autonomy is complicated by the fact that in some countries, particularly in Asia, female headship occurs in very marginalised households (women who are divorced, widows etc.). Aslam (2007) analysing the impact of female headship on child school enrolment in Pakistan finds that 'married women heads gender-discriminate as much as male heads but that widow-heads have significantly lower bias against girls in enrolment decisions than male heads'. Joshi (2004) examines the effect of female household headship on five different dimensions of children's educational outcomes; whether children work, have ever attended school, are attending school as well as their literacy and numeracy skills. Few of the studies to date have extended the analysis beyond the level of the household to include the role played by social norms, kinship systems and other socio-cultural factors. These were highlighted by Quisumbing and Mallucio (2003) as being particularly important in the context of Indonesia.

2.2. <u>Theoretical Framework</u>

From a theoretical point of view, the impact that an agent might have within the household affects economic variables depends crucially on the way in which the household is modelled. Within this literature collective models have been employed to analyse the effect of the balance of power between individual agents on household outcomes. The literature first developed around the unitary model put forward by Becker (1973), which views the household as a single homogenous entity. Total income and not its division among members, determines the allocation of resources by the household. This is equivalent to saying that household members pool their incomes. In unitary models the balance of power between husband and wife is irrelevant for household decisions and consequently female autonomy should not have any effect on household outcomes. Viewing the household as a unit has been criticised as unrealistic and subsequent research has relaxed the assumption of homogenous preferences.

Collective models consider households as the setting in which individuals with varying preferences bargain for outcomes. Intuitively these models can be thought of as a two-stage bargaining process. In the first stage all members pool household income. Overall income is subsequently allocated according to a particular sharing rule, θ, which is correlated with the bargaining power of each of the household members. More powerful members will receive a larger share of the resources. In the second stage individuals take θ as given and maximise their utility. In models of this kind, mother's utility which might include child welfare, for instance, will depend upon the mother's relative bargaining power. This factor, θ, can be a function of a variety of exogenous variables, which can include cultural factors like female autonomy. The endogeneity of bargaining power is an issue of concern in this literature. Basu (2006), for instance, develops a model, which allows for two-way causation: decisions taken by the household depend on θ and θ in turn depends on the decisions taken by the household. The result is a multiple equilibria model where both female labour supply and child labour, or more generally the status of children, can increase as well as decrease with differing values of θ.

2.3. <u>Primary Education in India:</u>

In the context of the Millennium Development Goals primary education has received renewed interest from policy makers. India, like many other countries, is undertaking efforts to improve its primary schooling. The flagship programme Sarva Shiksha Abhiyan (SSA) set itself the goal of achieving universal elementary education by 2010. This scheme is sponsored

by the Central Government and provides additional funding to states to enrol out-of-school children and improve school quality. The precursor to this programme was the District Primary Education Programme (DPEP), which was introduced in a few states in 1994 by the Government of India in collaboration with the World Bank, European Commission, the Government of Netherlands, UNICEF and the Department for International Development (UK). These external donors provided 85% of funding for this programme, while 15% came from the state governments. Phase I concentrated on 7 states – Assam, Haryana, Karnataka, Kerala, Maharashtra, Tamil Nadu and Madhya Pradesh. Phase II extended the DPEP to more states before it too was overtaken by the SSA. One of the achievements of the SSA programme was that by March 2007 98% of the rural population had a school within one kilometre.[9] In this context the role of age at school-entry is recognised as an important policy variable and the presence of over- and under-aged children is part of the policy agenda. In general India's primary schooling record has improved in the recent past. The latest government report (Government of India, 2008) has estimated that between 2000 and 2005 elementary enrolment has increased by 3.2 percent per annum. Net primary school enrolment rates for boys were approximately 92% between 2000-2005 and approximately 87% for girls (UNICEF, 2009). In India, the recommended age of starting school is 4 years (though the first two years are spent in Kindergarten).

In general, children enter primary school (Class 1) at 6 years. For children aged 6-11 at the time of the interview, the school starting age distribution is given in Table 1. Thus, we can see that, in India, a significant number of children start school between 6 and 8 years. There is no single entry point into education. It is also interesting to note that the 'more developed' states like Kerala have a smaller window in which children enter school. Thus, 97% of children at school started at the age of 6 in Kerala, the corresponding figure for Bihar is 35%. Similarly, in Tamil Nadu, 96% of children, who enrol in school, do so at the age of 6. However, even in these states, there is no single age at which children begin school. There is therefore the possibility that children whose parents prioritise education are more likely to start school early. If it is true that starting age reflects how seriously parents view education, then this variable could well also be a proxy for how children will perform in school. The table also confirms that right censoring is a problem in this sample, with 14% censored observations at the All-India level, a high of 38 in Bihar and a low of 0.7 in Kerala. Right censored observations includes the proportion of children who do not start school even after age 11 years.

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[9] Government of India, Annual Report 2007 – 2008.

What might determine the age at which children start school? A large majority of parents probably do conform to the age recommended by the state. However, some parents might choose to delay the starting age of children for a number of reasons. First, they may have too many children who are closely spaced. This makes it hard for them to devote the necessary time and money to sending each child to school. Second, the mother may be working and therefore very busy. She might prefer to put off child schooling for as long as possible. In this case, female autonomy would actually worsen the starting age of children. Third, parents may not think that schooling matters because expected returns to schooling are low or because the quality of schools is poor. In all of these cases, we can conclude that education has a relatively low priority within the household. However, one other possibility is that parents may be aware of their children's abilities and may feel that a late start would benefit the child. If this were true, then intrinsic or potential ability would be one of the factors that would influence the school starting age. In this case, of course, dropout rates and performance are likely to be worse for children starting late.

The impact of schooling age on performance is still open to question. Why are we concerned with the determinants of the age at which children enter school? In developing countries, the issue is not so much that a certain starting age affects educational outcomes but the fact that, whatever the starting age recommended by the government, there are many children who do not enter school at this age (see Table 1). The late starts reflect the constraints (both time and money) that parents face. They may also reflect the priority that parents place on education. The late start may therefore have an impact on educational attainment. We will consider this in what follows.

Concern with the starting age of children in school is important because it complements the literature on primary school enrolment in a number of ways. In the first instance, focusing on enrolment rates alone only tells part of the story. For a child to receive an adequate education two things are important. On the one hand she must be enrolled in school and on the other hand she must attend a grade suitable to her age. Enrolment rates will only give information about the first aspect and neglect the second. In connection to this, late enrolment can have potentially far reaching implications for a child's human capital. Not only is the accumulation of human capital delayed, its expected lifetime amount can also decrease. Since the likelihood of children dropping out of school increases with their age, every year enrolment is delayed by potentially translates into a year less of education. This problem is particularly severe in rural areas, where children are needed as farm-workers. Girls are especially affected by this, as they often have to stay home to look after younger siblings and

also because their movements outside the house tend to be restricted after a certain age. If it is ability that motivated the late start, then this once again, reinforces the possibility of late starters dropping out of education. Table 2 provides results from a simple logistic regression where the binary variable indicating whether the child has dropped out of school or not is regressed on the school starting age and the interaction of this with the gender dummy. The sample used in this estimation refers to children who are aged 6 to 11 at the time of the interview. The results indicate that the school starting age (SSA) significantly increases the probability of children dropping out from school for both the entire sample and for the sample of girls in determining dropout in rural areas. It is significant for the entire sample in 10 out of the 15 states/regions that we considered (Table 2).

Children who start late do not enter into school in a class appropriate to their age. Instead, they begin at the beginning and start in Class 1. So, it is possible that if children start school at different ages, then there will be children of slightly different ages in each class. These arguments and others like them have meant that the presence of over-aged children in primary education has become a point of political interest in the Indian context. The Department of School Education and Literacy of India (2005), for instance, reports that the gross enrolment ratio for 2004-2005 was 109 percent.[10] This finding implies that some children, who are not in the right age group, enrol in school every year. A further study of under/over-aged children based on DISE data further suggests that in 2004-2005 14 percent of children in primary school were not in the right age group (DISE, 2008a). More relevantly, in the whole of India an estimated 6 percent of children in primary schools in 2004-2005 were over-aged. The corresponding figure for upper-primary was 9 percent (DISE, 2008b).

3.   The Data, Summary Statistics and Measurements

The data used for the empirical analysis are taken from the third round of the National Family Health Survey (NFHS3) for India, 2005 (IIPS and Macro International 2007). The NFHS is part of the Demographic and Health survey series conducted for about 70 low to middle income countries.[11] The survey was conducted in 29 Indian states and interviewed over 230,000 women (aged 15-49) and men (aged 15-54) during the period December 2005 to August 2006. In common with the DHS, this survey collected extensive information on population, health, and nutrition, with an emphasis on women and young children. However, the survey also obtained information on schooling of all household members such as the

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[10]   The gross enrolment ratio is the ratio of "the gross enrolment of children as a proportion of the total children in the relevant age group".
[11]   The data are in the public domain and can be downloaded from www.macrodhs.com.

highest grade achieved, level of literacy and whether the household member is still enrolled at school. In addition, information concerning household decision making as well as the 'autonomy' status of surveyed women was also collected.[12]

The empirical analysis focuses on a sample of children aged 6 to 11. The total sample size consists of 41,282 children born to 28,610 mothers. Table 3 reports the school attendance status for all children. For the whole of India, 13% of children have never attended school. There is remarkable variation across Indian states. Bihar, for instance, has the worst educational outcomes with 36% of 6 to 11 year olds never having attended school. In Kerala and Tamil Nadu the figure is 1%. The low percentages for students repeating and dropping out of primary school are worth noticing. These data suggest that once children enter primary school, they are likely to complete it. Only 1% of children drops out and only 2% repeat a year. This fact makes a case for focusing on the age at which children start school. If dropout and repeating rates are low, the starting school age becomes the primary driver of children's educational outcomes. The interrelations between the educational attainments of parents and of their children are well documented. In the whole of India 47% of women do not have any education at all. The corresponding figure for men is 26%. Similarly, 6% of women and 11% of men have tertiary education (Table 3). These percentages are subject to considerable geographical variation. Kerala is the state faring the best in terms of educational attainment. Only 3% of men and women have no education at all. Furthermore, 16% of women and 12% of men have tertiary education. These achievements stand in stark contrast to other states. In Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh, for instance, less than 50% of women have attended school. The schooling record for men is worse in these states, but the difference is less pronounced.

Female Autonomy Variables

As is common with the DHS, the Indian NFHS also elicited responses to certain questions that may be interpreted as providing information on various aspects of autonomy enjoyed by the woman. The information can be grouped into three common spheres of autonomy: economic, decision-making and emotional autonomy. Details of the questions asked are included in Appendix 1. Information on economic autonomy is captured through questions relating to whether the woman has a say about what should be done with her husband's money, whether she has money for her own use and whether she has a bank account. Table 4 presents summary measures for the responses to these questions. About two-thirds of women

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[12] Due to the protocols associated with the collection of HIV data, this round of the NFHS unfortunately, did not provide any village level information or any district identifiers.

at the All-India level (71%) have some say on what happens to the money of their husband. A lower percentage, 45%, has money for their own use and only 15% of women own a bank account.

To capture women's decision making authority, women were asked whether they decided jointly with their husbands on a number of household matters. These included her own health care, decisions relating to small and large household purchases, whether the woman requires permission to go the market or to places outside the community. Summary measures for these aspects of decision-making autonomy are reported in Table 5. For the whole of India 70% of women have a say on their own health care and 74% on small and large household purchases. The vast majority of women interviewed (91%) do not need permission to leave the house.

Finally, emotional autonomy is captured by considering questions on physical violence and sexual relations within the household. First, the woman is asked whether she believes that her husband is justified in beating her in the following circumstances: she goes out without telling him, neglects the house, argues with him, refuses sex, burns the food, is unfaithful or disrespectful. Secondly whether she believes she is allowed to refuse sex if her husband has other women, he has a sexually transmitted disease or if she is tired. Summary measures of the responses to these questions can be found in Table 6.

It is customary to aggregate qualitative responses to indices. Aggregate responses for each dimension of autonomy are reported in Table 7. Economic autonomy is captured by adding the three questions laid out above. This indicator takes an All-India average value of 1.32 The index for decision-making autonomy also takes a maximum value of 4 and an All-India average of 3.27. Emotional autonomy, in turn, is captured by ten questions and the index has an All-India average of 7.22. One way to capture the underlying notion of female autonomy is to add these three indexes. The resulting number takes a maximum value of 17 and an average of 11.81 for the All-India sample.

4.   **Econometric Methodology**

Our estimation methodology uses survival analysis in which female autonomy is treated as a latent construct (Skrondal and Rabe-Hesketh, 2007). In what follows, we present the joint model for the school starting age and female autonomy variable using a 'Generalised Linear Latent and Mixed Models' or GLLAMM framework.[13] Figure 1 provides a simple

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[13] See Rabe-Hesketh et al. (2004); Skrondal & Rabe-Hesketh (2004).

representation of the path diagram associated with the various relationships that may be considered. These models consist of two building blocks: the response model and the structural model. The former specifies the relation between the latent and the observed variables and the latter specifies how the latent variables are related to one another and possibly to other observable variables. In the present case the responses consist of two aspects: age of entry into school of the child, and measurements of female autonomy at the mother level.

The conditional expectation of response **y** given observables, **x** and **z**, and the latent female autonomy η is linked to the linear predictor, ν, via the link function $g(\cdot)$

$$g(E[y \mid x, z, \eta]) = \nu \tag{1}$$

The first response variable – school entry age

The main variable of interest is the first response variable which is the age at which the child entered primary school. In survival analysis terminology, a child here is transiting from the state "out of school" into the state "in school". The time a child spends without entering school from the recommended start-age (usually 6) is the duration we are interested in. Starting age is recorded with respect to the Indian academic year, which is the April 1st, and is recorded in years. We use a discrete time hazard framework and restrict our analysis to a sample of children between 6 and 11 years. If a child has not started school at the time of the interview the observation is coded as censored.

All durations are measured with respect to age 6. For example, if a child is observed to enter school at age 8, the duration for this child will be recorded as 3 years. This implies an observable window of duration equal to a maximum of six years. All children entering school at age 6 will be recorded to have duration of one.

The discrete time hazard h_k for the kth interval ($k=1,..,6$) denotes the conditional probability of a child entering school in the kth interval conditional on not having enrolled in school before,

$$h(k) = \frac{\Pr(t_{k-1} \leq T < t_k)}{\Pr(T \geq t_{k-1})} \tag{2}$$

Hence, the probability of observing a completed duration of length d is given by

$$p_{ij}(d) = h_{ij}(d) \prod_{k=1}^{d-1} \{1 - h_{ij}(k)\} \qquad (3)$$

In the above specification, d denotes the age at which the child i born to mother j enters school where the entry age is measured with respect to age 6. In the case of a child who is not observed to enter the school, i.e. the probability of an incomplete spell of d years, is given by

$$p_{ij}(d) = \prod_{k=1}^{d} \{1 - h_{ij}(k)\} \qquad (4)$$

The above model consisting of equations (3) and (4), can be recast in terms of a binary choice model by observing that each child will have multiple observations (Allison, 1982). The observation window is age 6 to age 11. Each child will have a set of up to six binary indicators taking the value of 0 continuously in all years starting from age 6 until s/he enters school when the binary indicator will take the value of 1. If an observation is censored, that is if the child is not observed to enter school during the observation window, the child will only have a series of 0s. To provide an example, first consider a child who is aged 8 at the time of the interview and who entered school at the age of 6. This child will have one observation recording a value of 1 as the child entered aged 6. Take another child who is also aged 8 but has not entered school. This child will have three observations (one for each year starting from 6 to 8) recording a value of 0 for every observation. A child who is 11 and not observed to enter school will have 6 observations all recording a value of 0. The last two examples provide an example of a case where the observations are censored.

In summary, given the above discussion, the first response variable in the model, y_1 will be a vector of a set of 0s and 1s for each child in the family. The length of this column vector will depend on the age at which the child entered school and also whether the time to starting the school is censored or not.

We assume the link g to be logit in (1) and specify

$$v_{1ij} = x'_{ij}\alpha + \tau_k + \lambda_1 \eta_{Fj}^{(3)} + \eta_{Cij}^{(2)} \qquad (5)$$

where $i=1,...,n_j$ indexes the child and $j=1,..,N$ indexes the mother. $\mathbf{x}_{ij}$ is a vector of strictly exogenous observable child and family specific characteristics that influence $h_{ij}(k)$ and $\boldsymbol{\alpha}$ is the vector of parameters associated with $\mathbf{x}_{ij}$. τ_k is the interval specific intercept that informs us about the shape of the hazard. The autonomy status of the mother is $\eta_{Fj}^{(3)}$. $\eta_{Cij}^{(2)}$ denotes the

child specific unobservable. Level 1 in this multi-level model refers to the specific time interval. Levels 2 and 3 refer to the child and mother respectively. In addition, we also allow for an additional cluster at the district level which forms the 4th level. However, we do not explicitly show this to keep the notation simpler.

Equation (5) is thus equivalent to assuming that $h(k)$ is

$$h_{ij}(k) = \frac{\exp(x'_{ij}\alpha + \tau_k + \lambda_1 \eta_{Fj}^{(3)} + \eta_{Cij}^{(2)})}{1 + \exp(x'_{ij}\alpha + \tau_k + \lambda_1 \eta_{Fj}^{(3)} + \eta_{Cij}^{(2)})} \tag{6}$$

The second response variable – female autonomy

As discussed earlier, this paper deviates from the previous literature with respect to how the autonomy of the woman is modelled. The customary way of modelling female autonomy is to create an index by aggregating the qualitative answers provided by the woman. This index is subsequently used as one of the explanatory variables in the empirical model. However, we do not take this approach for two reasons: first, since different spheres of autonomy are highly correlated, assuming a single index form which weights all answers equally may not be appropriate; second, as demonstrated by Agarwala and Lynch (2006), this can also result in a significant loss of fit.

In the present analysis, we assume that female autonomy is an exogenous cultural factor, which affects a number of different but interrelated aspects of the woman's life. These aspects are divided into three categories or spheres: economic, decision-making and emotional autonomy. Although 'autonomy' itself is unobservable, we assume that we have a set of measurements (via the answers to a set of questions provided in Appendix 1), which will tell us something about the underlying latent trait. i.e. we assume that common variation in these measurement variables can be used to infer the properties of the latent factor of female autonomy. In the present case all response variables are binary and we consequently specify a logit link for these dichotomous responses and model the linear predictor as

$$\nu_{lj} = \lambda_l \eta_{lj}^{(3)} \tag{7}$$

where l=2 (economic autonomy), 3 (decision making autonomy) or 4 (emotional autonomy). Appendix 2 provides further details of the full specification.

The structural Model

The structural model defines the relationships between the various latent variables - ηs - for the mothers and takes the form

$$\eta_j^{(3)} = B\eta_j^{(3)} + \Theta z_j + \zeta_j \qquad (8)$$

where $\eta_j^{(3)}$ is a 4 by 1 vector consisting of the four autonomy variables, $\eta_{Fj}^{(3)}$ (overall female autonomy), $\eta_{2j}^{(3)}$ (economic autonomy), $\eta_{3j}^{(3)}$ (decision making autonomy) and $\eta_{4j}^{(3)}$ emotional autonomy variables for mother *j*. **B** is the matrix of structural equation coefficients. **z** is a vector of exogenous factors that influence the autonomy variables and is allowed to have different effects on different autonomy spheres. ζ is a vector of error terms. As before, restrictions required for identification are provided in Appendix 2.

Equations (5), (7) and (8) form the basis of our model and they are estimated jointly.

5.   <u>Estimation and Results</u>

The empirical specification allows for a number of additional factors to influence children's entry into school. These comprise characteristics of the children, the mother, the father, the household, the district and the baseline hazard. Children's characteristics are the sex of the child and the number of older and younger brothers as well as sisters. Mother's characteristics include a dummy for whether she has completed primary school, her caste and her religion. The father's education is also controlled for. The household's idiosyncrasies can affect its member's economic outcomes and are therefore included in the model. They encompass an indicator variable for the wealth quintile the household belongs to and whether it is situated in a rural area. Finally, interval specific indicators and indicators for the year the child turned 6 are included. The former make up the baseline hazard and the latter control for initial conditions. We estimate three models. Model (1) analyses school entry independently of female autonomy. This specification encompasses all the above-mentioned child-, mother-, father- and household-specific factors but female autonomy is not included. Model (2), conversely models female autonomy via an indicator, which is constructed by adding the qualitative answers provided by the woman. This variable takes a maximum value of 17 and its means and standard deviation are reported in Table 7. This approach corresponds to the usual way of capturing female autonomy. Finally, model (3) is our structural equation model specification summarised in equations (5), (7) and (8) and in the path diagram in figure 1. In this specification each sphere of female autonomy is captured by a number of fallible

measures. These spheres subsequently make up the overarching concept of female autonomy, which in turn affects entry into school. The distributions of these four latent variables may also be of interest. For the whole India sample the Kernel densities for the Bayes' shrinkage estimates are provided in figure 2.

5.1. Female Autonomy and Education

The results for the three aforementioned models are summarised in table (8). This table only reports the coefficients and standard errors for female autonomy and the baseline hazard.[14] Overall a woman's autonomy appears to positively influence the probability of her children enrolling in school. Across the different states most coefficients and factor loadings are positive. For the whole of India, for instance, the coefficient in model 2 is 0.02 and the factor loading in model 3 takes the value of 0.725. Both are significantly different from zero. The relation between female autonomy and school enrolment is significantly negative only for model 3 in the states of Orissa and Tamil Nadu. In all other instances it is positive, albeit not always significant. Throughout the 15 major states of India the factor loadings in model 3 are – on average – more significant compared to the coefficients in model 2. These latter estimates are only significantly different from zero in six states and only in three states are they significant at the 5% or 1% level. In model (3), conversely, female autonomy influences school enrolment significantly in eleven states and in nine instances the estimates are positive. These results are in line with many previous findings documenting the positive correlation between a woman's autonomy and welfare outcomes for children. Prima facie the present findings suggest three notions. Firstly, the household matters for education, secondly spouses have different preferences regarding their children's education and thirdly the balance of power between the spouses is an important factor for children's educational outcomes. The first concept is a well-documented phenomenon. Parents are assumed to make decisions concerning their children's education and, therefore, their characteristics can become important determinants. Concerning the second conclusion, a growing literature suggests differences in male and female preferences and women have been seen as strong advocates for their children's welfare. In a recent article Croson and Gneezy (2009) survey research on gender differences in preferences. The third interpretation can be seen as supporting the collective model of the household, where the bargaining power of each member determines the demand of the household as a whole.

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[14] The estimates for all covariates and for the true covariate model are reported in Appendix (4)

An interesting comparison to draw is the one between the estimates for female autonomy modelled in the customary way (model 2) and our structural equation model specification (model 3). As mentioned above the number of significant coefficients is larger for model 3 than for model 2. Furthermore, the coefficients' magnitudes are larger for model 3. The largest coefficient (in model 2) on an index of female autonomy is 0.122 in Kerala, which is significant only at the 10% level, followed by 0.060 in Haryana, 0.038 in Punjab and 0.024 in the North Eastern States. The latter three are all significantly different from zero. Most of the other coefficients magnitudes lie between 0.01 and 0.03. In contrast to this the largest coefficient in the structural equation model, model (3), is 2.585 in Madhya Pradesh, which is highly significant. The North Eastern States, Rajasthan and Haryana also have a similar magnitudes of 2.417, 2.365 and 1.283. Most the other coefficients lie between 0.6 and 1.6. This model also produces two negative coefficients. In Orissa and Tamil Nadu female autonomy appears to have negative and significant influence on school enrolment. As Agarwala and Lynch (2006) pointed out, measuring female autonomy by employing indices is overly simplistic. One of the major drawbacks is that every answer is given the same weight. So, for instance, the woman having money for her own use is assumed to be as important for female autonomy as the woman's freedom to decide what to purchase for the household. Furthermore, aggregating qualitative answers provided by the woman ignores the fact that different questions relate to different spheres, which in turn are interconnected. The results of the present analysis imply that by neglecting these details a large part of the effect of female autonomy is not captured. In other words, by not modelling the complex relationships between the various measurements of autonomy as well as their interrelations, the effect of female autonomy is attenuated.

A further finding of the empirical analysis is that the positive influence of female autonomy on school enrolment appears to be particularly pronounced in the Northern regions of India. In the Southern states of India (Andhra Pradesh, Kerala, Tamil Nadu and Karnataka) the coefficient estimates for female autonomy are often insignificant or even negative. For Tamil Nadu, for instance, female autonomy appears to have a significant negative influence (-2.447) whereas no significance can be detected in Kerala and Karnataka. Andhra Pradesh is the only Southern state where female autonomy has a positive and significant effect on school enrolment (1.001). Contrarily to this for the states located in the middle of India (Maharashtra, Gujarat, Orissa and Mandhya Pradesh) the positive effect of female autonomy appears stronger. Mandhra Pradesh, for instance, has the largest positive and significant coefficient of all states (2.585). Similarly for Maharashtra the factor loading is also positive

and significant (1.021) whereas the contrary is true for Orissa (-1.427). Finally, the North (Northeastern States, Haryana, Bihar, Uttar Pradesh, Rajasthan and West Bengal) shows the strongest effects of female autonomy. For the states of Uttar Pradesh (1.001), Rajasthan (2.365), Punjab (0.660), West Bengal (0.557) and Bihar (1.462) the factor loadings are positive and highly significant. Furthermore, in this geographical area no negative and significant influence is present. A possible explanation for this is explored in the following section and is connected to the fact that the Northern states are characterised by lower enrolment as well as lower female autonomy.

The estimations for the time intervals suggest a decreasing baseline hazard. For the majority of the sample the coefficients are negative and increasing in absolute magnitude albeit not monotonically. For the whole of India, for instance, the estimates range from -0.421 to -0.828 in model (1), from -0.422 to -0.836 in model (2) and from -0.501 to -0.935 in model (3). Most states (Andhra Pradesh, Gujarat, Haryana, Karnataka, Maharashtra, Punjab, Uttar Pradesh and Kerala) show a similar pattern. In some instances the baseline hazard is mostly insignificant (Orissa, West Bengal and models 1 and 2 in Bihar). Only in a few instances it consists of positive and significant coefficients (model 3 in Madhya Pradesh, Bihar and Rajasthan and the North Eastern States). A decreasing baseline hazard can be interpreted as follows: for a child not attending school the more time passes the less likely it is for him or her to enrol in school. A possible reason for this might be parental behaviour. As the child gets older the parents could believe that it is too late for school enrolment and decide that the child should not attend school at all. A further reason is connected with household production. Especially in rural areas children provide important labour inputs for production. As children grow older their productivity on the farm is likely to increase. This implies that the opportunity cost of sending them to school increases, which in turn results in a negative relation between age and school enrolment. In general, the fact that age is a significant and negative determinant of school enrolment highlights the importance of focusing on starting school age as an educational outcome. The results presented in Table 2 highlighting the positive relations between starting school age and drop-out rates further strengthen this point. Taken together these two pieces of evidence suggest the following. Firstly, every year not spent at school decreases the chances of the child enrolling in school. Secondly, for children, who do attend school, it increases the probability of dropping out. This last point can imply a considerable reduction in the life-time amount of human capital a child accumulates. These findings can be

seen as evidence for treating the age at which children start school as a schooling outcome and for future research to focus on it.

5.2. Other Covariates and Results from the Structural Model

The coefficient estimates for all covariates for a selection of four states (Kerala, Bihar, Mandhya Pradesh and Andhra Pradesh[15]) are reported in Tables 9.[16] Columns 1, 2 and 3 give the figures for the duration model for school entry based on models (1), (2) and (3) respectively. Overall, these results suggest the following. The child's mother belonging to a backward caste or tribe has a negative effect on school enrolment. This effect appears to be particularly strong in Bihar and Andhra Pradesh. Similarly, the woman being of Muslim faith is negatively connected with the child starting school. Like above Andhra Pradesh and Bihar show the strongest effects for the Muslim dummy. Maternal education is seen as a major driving force for improving children's outcomes. In line with this it exhibits a positive coefficient for the states of Bihar and Andhra Pradesh. Paternal education, however, seems to have an even more consistent influence. The coefficients are positive and significant across all four states. The family's wealth also appears to be important. Across all four major states its influence is positive. This is particularly pronounced for higher wealth quintiles. The dummy variables for the household being a rural one, for the child being a girl and for initial conditions do not appear to have a consistent effect over the different states. The same holds for the variables counting the siblings of the individual child.

Columns 4, 5 and 6 refer to the structural equation model outlined in equations (5), (7) and (8) and report the estimates of the true covariate model. This part of the SEM shows the effect of covariates on the latent variables. In the present case the dependent variables are the latent factors for economic, decision-making and emotional autonomy. Furthermore, it reports the relation between the three spheres of female autonomy and its general concept. Overall the results for the true covariate model exhibit substantial variation. The correlations between the covariates and the three spheres of autonomy differ across regions as well as across spheres. No variable has the same influence for every sphere across the four states under scrutiny. The woman belonging to a backward caste or tribe, for instance, appears to have a relatively constant positive effect. It is, however, insignificant in Kerala and negative for economic and decision-making autonomy in Madhya Pradesh. The woman being of Muslim faith has a heterogeneous influence on the different spheres of autonomy. In Andhra Pradesh

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[15] Kerala and Bihar were chosen because they are believed to have particularly high and low levels of female autonomy. Mandhya Pradesh and Andhra Pradesh were selected because they have the highest and lowest female autonomy indices in table (7).
[16] The estimates for the remaining states are reported in Appendix (4).

and Bihar it is positive for emotional autonomy and negative for the other spheres; in Kerala positive for decision-making and negative for emotional autonomy and in Madhya Pradesh insignificant all together. Maternal education, in turn, has a relatively constant and positive influence in Andhra Pradesh and Bihar. The coefficients for paternal education, by contrast, have a more negative, albeit quite heterogeneous effect. Wealth in Andhra Pradesh appears to influence decision-making and emotional autonomy positively but the effect on economic autonomy is negative. In Kerala, by contrast, wealth only influences economic autonomy and does so in a positive way. In Bihar, in turn, the coefficients are positive throughout, whereas the opposite is true for Madhya Pradesh. Finally, the rural dummy is negative for Bihar and Madhya Pradesh.

The SEM also estimates the correlations between the latent variables specified in the model. The ones between female autonomy and its sub-spheres are reported here. The relation between female and economic autonomy has been set equal to one for identification. For the four states reported here the correlations between female and decision-making autonomy are mainly positive. For Andhra Pradesh, Bihar and Madhya Pradesh the factor loadings are positive and significant whereas the estimate is significantly negative for Kerala. The relation between emotional autonomy and its overarching concept, by contrast, is negative for all four states, albeit insignificant for Kerala. Table 10 lists the correlations between the three different spheres of autonomy. The one between economic and emotional autonomy has been set equal to one for identification. For the four states under scrutiny these interdependencies vary. For Bihar and Madhya Pradesh, for instance, the correlation between economic and decision-making autonomy is negative and significant whereas the one between emotional and decision-making is positive and significant. The opposite holds for Andhra Pradesh. In Kerala, by contrast, both estimates are insignificant. Strategic spousal interaction may serve as a possible explanation for this phenomenon. Bargaining between husband and wife takes a central part in more recent collective models (Basu, 2006, for instance) and is often seen as a major determinant of the household demand function. In this framework the two areas of autonomy could be seen as substitutes by the woman and consequently traded for one another. A negative (positive) coefficient might, therefore, indicate that the woman places a relatively low (high) value on this aspect of female autonomy.

Overall, the heterogeneity exhibited by the results in this sub-section is noteworthy and emphasises the complexity of the concept of female autonomy. The fact that the correlations between the different latent factors vary across states appears particularly telling. This finding

might suggest that a plethora of factors and strategic interactions lies behind the autonomy of a woman, further highlighting the importance of further research in this area.

6. Discussion

Two results of the present analysis appear particularly interesting and worthy of further discussion. The first one concerns the female autonomy indices summarised in Table 7. According to conventional wisdom women's autonomy is higher in the Southern states of India, especially in Kerala and Tamil Nadu. The South is characterised by a mainly matrilineal society in which women have a considerably higher autonomy. Furthermore, parts of the South of India, especially Kerala, experienced a communist system, which favoured equality between the sexes. The states further to the North, by contrast, fare worse in indicators often interpreted as proxies for female autonomy. Uttar Pradesh for instance is known for its particularly bad sex ratio. With a national average of 106 men for 100 women Uttar Pradesh has 112 men per 100 women.[17] Similarly Bihar has a sex ratio above the national average with 1.08 men per woman. Contrarily to this the indices constructed by adding the qualitative answers provided by the woman (Table 7) suggest that Northern states are characterised by higher female autonomy than the South. Bihar and Uttar Pradesh, for instance, show overall female autonomy indices of 12.46 and 12.84. By contrast the indices for Kerala and Tamil Nadu are 11.41 and 11.24. A possible explanation for this apparent paradox is the fact that indices weight all questions equally and will consequently fail to properly reflect the autonomy enjoyed by the woman. The comparison of economic autonomy in Bihar and Kerala might serve as a clarifying example. Overall, Bihar has a higher index (1.45) compared to Kerala (1.17). The questions underlying these figures, however, tell a different story (Table 4). In Bihar 71% of women have a say on how their husband's money is spent, 63% have money for their own use and 11% have a bank account. In Kerala the respective figures are 61%, 22% and 31%. Ex ante having a bank account appears to give the highest amount of financial independence. It might, therefore, be considered the most important for economic and consequently for female autonomy. In Kerala the relevant percentage is considerably higher than in Bihar, suggesting that women in this Southern state enjoy a higher level of economic autonomy. Because Bihar, however, shows higher percentages for the other two "less important" questions, its economic autonomy index is considerably higher than Kerala's. These arguments may be seen as further reasons against the adoption of traditional female autonomy indices.

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[17] Source UNICEF (2009)

The second curious finding is that the effect of female autonomy appears particularly strong in states, which are located in the northern regions of India (Bihar, Rajasthan, Uttar Pradesh and the North Eastern States). The reason for this may be found in two particularities of this geographical region. As mentioned earlier, Southern states are characterised by higher levels of female autonomy. Furthermore, schooling achievements for children are also worse in the North compared to other regions and particularly the South. For the whole of India 13% of children aged 6 to 11 are not enrolled at school. Most of the states under scrutiny here have lower enrolment rates. Bihar has the worst schooling outcomes in India with 38% of children in the relevant age group never having been to school. Similarly Uttar Pradesh and the North Eastern States have non-enrolment rates above the national average with 19% and 17% respectively (Table 1). In Uttar Pradesh, for instance, despite there being a long tradition of learning, access to education is often restricted to richer individuals and the religious elite. Haryana is the only state in this group where enrolment rates are above the national average with around 12% of children never having attended school. In contrast to this enrolment rates in the Southern parts of India are consistently higher. Only 5% of children in the relevant age group in the South of India have never attended school and enrolment rates are as high as 99% for the states of Kerala and Tamil Nadu. This constellation of pieces of evidence suggests that female autonomy matters most for education when both education and general female autonomy are low. Two possible explanations can be found for this fact. The first is connected to a particular characteristic of female autonomy. According to this argument autonomy is a relative concept and a woman's autonomy is not exclusively determined by the factors captured by the variables in the dataset (reported in Appendix 1). It also depends on the general level of autonomy in her community. In this sense a woman's autonomy can only be evaluated relative to other individuals around her. If – like in the South – the overall level of autonomy is high, it is hard for a woman to be "more" autonomous than others. It consequently becomes increasingly difficult to detect an effect of female autonomy on education. Information on district-level autonomy might help to investigate this train of through further; a possible route for future research. The second explanation is connected to the value a woman places on the education of her children. The results outlined above might be a result of the fact that a woman values her children's education highly and prioritises it over other factors. Suppose that – like envisaged by collective models – men and women bargain over different household outcomes. In this scenario the bargaining power of each agent might determine which factor he or she can decide upon. Now suppose a scenario where the woman has a very low level of autonomy and her bargaining power increases by "one

unit". It is likely that she will use this "additional" bargaining power for something she values highly. The fact that the influence of female autonomy is strongest when it is low suggests that the woman uses increases at low levels of autonomy to improve her children's education. This in turn suggests that she values this particular aspect very highly. Whichever explanation, the resulting policy implication is clear. Efforts to improve women's autonomy should be directed at the worst off both in terms of autonomy as well as in terms of schooling outcomes.

Overall the findings of the present analysis are encouraging for two reasons. In a first instance, the fact that one intrinsically valuable concept improves another can significantly increase the effectiveness of policies. By improving a woman's position within the household, policy makers will not only improve women's lives but will also contribute towards the second Millennium Development Goal of universal primary education. In addition to this the findings of the present analysis provide policy makers with an additional tool for improving educational outcomes. Policies aimed at improving school enrolment should, therefore, not only focus on children but also on their mothers' position within the household. The present analysis views female autonomy as an exogenous cultural factor but a number of studies try to endogenise this concept and investigate possible determinants of a woman's autonomy.[18] These results might be used to formulate effective policies for improving women's situations, especially in areas where both female autonomy and children's educational outcomes are low.

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[18] Jeejeebhoy and Sathar (2001) are an example of this

References

Abadian, S. (1996). Women's autonomy and its impact on fertility. <u>World Development</u>. Vol. 24, No. 12, 1793 - 1809

Afridi, F. (2005). Intra-household bargaining, birth order and the gender gap in schooling in India. mimeo

Agarwala, R. and Lynch, S. (2007). Refining the measurement of women's autonomy: application of a multidimensional construct. <u>Social Forces</u>. Vol. 84, No. 4, 2077 - 2098

Allison, P. D. (1982). Discrete-Time Methods for the Analysis of Event Histories. <u>Sociological Methodology</u>. Vol. 8, 61-98.

Aslam, M. (2007). Rates of return to education by gender in Pakistan. <u>GPRG Working Paper</u> No. 064

Banerjee, A, Cole, S, Duflo, E and Linden, L. (2007). Remedying Education: Evidence from two randomized experiments in India. <u>Quarterly Journal of Economics.</u> Vol. 122, No. 3, 1253 - 1264

Basu, K. (2006). Gender and say: a model of household behavior with endogenously determined balance of power. <u>Economic Journal</u>. Vol. 116, No. 511, 558 - 580

Basu, K. and Ray, R. (2002). The collective model of the household and the unexpected implication for child labor. <u>World Bank Policy Research Working Paper</u>. No. 2813

Becker, G. S. (1973). A theory of marriage: Part I. <u>Journal of Political Economy</u>. Vol. 81, No. 4, 813 - 846

Bennet, F. (2002). Gender implications of social security reform. <u>Fiscal Studies</u>. Vol. 23, No. 4, 559 - 584

Bhalotra, S and Zamora, B. (2008). Primary Education in India: Prospects of meeting the MDG target. <u>CMPO Working Paper.</u> No. 08/190

Bhat, P. N. M. (2002). Returning a favor: reciprocity between female education and fertility in India. <u>World Development.</u> Vol 30, No. 10, 1791 - 1803

Bloom, S.S., Wypij, D. and Das Gupta, M.D. (2001). Dimensions of women's autonomy and the influence of maternal health care utilization in a North Indian city. <u>Demography.</u> Vol. 38, No. 1, 67 - 78

Borooah, V. K. and Iyer, S. (2005). Vidya, Veda, Varna: The influence of religion and caste on education in rural India. <u>Journal of Development Studies.</u> Vol. 41, No. 8, 1369 - 1404

Chaudhri, D. P. (1997). A policy perspective on child labour in India with pervasive gender and urban bias in school education. <u>Indian Journal of Labour Economics.</u> Vol. 33, No. 2

Chavoshi, M.H., Abbasi-Shavasi, M.J. and McDonald, P. (2004). Women's autonomy and reproductive behaviour in Iran, Presented to the Australian Population Association, 12th Biannual Conference

Cigno, A. and Rosati, F. C. (2002). Child labour, education and nutrition in rural India. Pacific Economic Review. Vol. 7, No. 1, 65 - 84

DeRose, L.F. (2002). Continuity of women's work, breastfeeding and fertility in Ghana in the 1980s. Population Studies. Vol. 56, No. 2, 167 - 179

Dharmalingam, A. and Morgan, S. P. (2004). Pervasive Hindu-Muslim fertility differences in India. Demography. Vol. 41, No. 3, 529 – 545

District Information System for Education, India. (2008a). Analytical Report and Tables, 2007-2008

District Information System for Education, India. (2008b). Elementary Education in Rural/Urban India, 2007-2008

Dixon-Mueller, R. (1978). Rural women at work. Baltimore, Maryland, Johns Hopkins University Press for Resources for the Future

Doss, C.R. (1996). Testing among models of intra-household resource allocation. World Development. Vol. 24, No. 10, 1597 - 1609

Dreze, J and Ghandi Kingdon, G. (2001). School Participation in rural India. Review of Development Economics. Vol. 5, No. 1

Duraisamy, M. (2000). Child schooling and child work in India. Paper prepared for presentation at the Eight World Congress of the Econometric Society. 2000

Durrant, V. L. and Sathar, Z. A. (2000). Greater investments in children through women's empowerment: A key to demographic change in Pakistan. Paper presented to the annual meeting of the Population Association of America, Los Angeles, USA

Dyson, T. and Moore, M. (1983). On kinship structure, female autonomy and demographic behavior in Iran. Population and Development Review. Vol. 9, No. 1, 35 - 60

Emerson, P. and Portela Souza, A. (2002). Bargaining over sons and daughters: child labour, school attendance and intra-household gender bias in Brazil. Vanderbilt University Working Paper. No. 0213

Haddad, L. and Hoddinott, J. (1991). Household expenditure, child anthropometric status and the intra-household division of income: Evidence from the Cote d'Ivoire. Woodrow Wilson School Working Paper. No. 155

Hoddinott, J. (1992). Rotten kids and manipulative parents: are children old age security in Western Kenya? Economic Development and Cultural Change. Vol. 40, No. 3, 545 - 565

Hoddinott, J. and Haddad, L. (1995). Does female income share influence household expenditure? Evidence from Cote d'Ivoire. Oxford Bulletin of Economics and Statistics. Vol. 57, No. 1, 77 - 96

Hogan, D.P., Bernhanu, B. Hailemariam, A. (1999). Household organization, women's autonomy and contraceptive behavior in Ethiopia. Studies in Family Planning. Vol. 30, No. 4, 302 - 314

International Institute for Population Sciences (IIPS) and Macro International. (2007). National Family Health Survey (NFHS-3), 2005-06: India, Mumbai: IIPS.

Jejeebhoy, S.J. (2000) Women's autonomy in rural India: It's dimensions, determinants and influence of context, in Presser, H.B. and Sen, G. (eds.), Women's Empowerment and Demographic Processes, Moving Beyond Cairo, Oxford University Press

Jejeebhoy, S.J. and Sathar, Z.A. (2001). Women's autonomy in India and Pakistan: The influence of religion and region. Population and Development Review. Vol. 27, No. 4

Joshi, S. (2004). Female household-headship in rural Bangladesh: Incidence, determinants and impact on children's schooling. Yale Economic Growth Center Working Paper. No. 894

Kabeer, N. (1994). Reversed realities, gender hierarchies in development thought. Verso Press

Kingdon, G.G. (2007). The Progress of School Education in India. Global Poverty Research Group Working Paper Series. No. 071

Lancaster, G., Maitra, P. and Ray, R. (2006). Gender Bias in Nutrient Intake: Evidence from selected Indian states. South Asia Economic Journal. Vol. 7, No. 2, 255 - 299

Lee, J. (2007). Sibling's size and investment in education: an Asian instrument. Journal of Population Economics. Vol. 21, No. 4, 855 - 875

Lundberg, S.J., Pollak, R.A. and Wales, T.J. (1997). Do husbands and wives pool their resources? Evidence from the United Kingdom child benefit. Journal of Human Resources. Vol. 32, No. 3

Ministry of Human Resource Development, Government of India. (2005). Department of School Education and Literacy, Chapter on Elementary Education

Ministry of Human Resource Development, Government of India. (2008). Department of School Education and Literacy, Annual Report 2007-2008

Medel-Anonuevo,C. (1993). Women, Education and Empowerment: Pathways towards Autonomy. Report of the International Seminar on Women's Education and Empowerment, Hamburg, Germany

Medel-Anonuevo,C., and Bochynek. (1993). The International Seminar on Women's Education and Empowerment, in Medel-Anonuevo,C. (Ed.) (1993), Women, Education and Empowerment: Pathways towards Autonomy, UNESCO Institute for Education: Hamburg.

Muthen, B. O. (2002). Beyond SEM: general latent variable modelling. Behaviormetrika. Vol. 29, No. 1, 81-117.

Morgan, S.P. and Niraula, B.B. (1995). Gender inequality and fertility in two Nepali Villages. Population and Development Review. Vol. 21, No. 3, 541 - 561

Prentice, P.L. and Gloeckler, L.A. (1978). Regression Analysis of Grouped Survival Data with Applications to Breast Cancer Data. Biometrics. Vol. 34, 7 -67.

Quisumbing, A. R. (1994). Gender differences in agricultural productivity: a survey of empirical evidence. FCND Discussion Paper. No. 5. International Food Policy Research Institute

Quisumbing, A.R. and Maluccio, J.A. (2003). Resources at marriage and intrahousehold allocation: Evidence from Bangladesh, Ethiopia, Indonesia and South Africa. Oxford Bulleting of Economics and Statistics. Vol. 65, No. 3, 283 - 327

Rabe-Hesketh, S. and Skrondal, A. (2008). Classical latent variable models for medical research. Statistical Methods in Medical Research. Vol. 17, 5-32

Rabe-Hesketh, S., Skrondal, A. and Pickles, A. (2003). Maximum Likelihood estimation of generalised linear models with covariate measurement error. The Stata Journal. Vol. 3, 385 - 410

Rabe-Hesketh, S., Skrondal, A. and Pickles, A. (2003). Correcting for covariate measurement error in logistic regression using nonparametric maximum likelihood estimation. Statistical Modelling. Vol. 3, 215 - 232

Rabe-Hesketh, S., Yang, S. and Pickles, A. (2001). Multilevel models for censored and latent responses. Statistical Methods in Medical Research. Vol. 10, 409-427.

Safilios-Rothschild, C. (1982). Female power, autonomy and demographic change in the Third World. In Anker R, Buvinic M, Youssef NH, ed. Women's roles and population trends in the Third World. London, Croom Helm

Schultz, T.P. (1990). Testing the neoclassical model of family labor supply and fertility. Journal of Human Resources. Vol. 25, No. 4, 599 - 634

Skrondal, A and Rabe-Hesketh, S. (2004). Generalized latent Variable modelling, Chapman & Hall / CRC Press.

Skrondal, A and Rabe-Hesketh, S. (2007). Latent variable modelling: a survey. Scandinavian Journal of Statistics. Vol. 34, 714-745.

Smith, L. C. and Byron, E. M. (2005). Is greater decisionmaking power of women associated with reduced gender discrimination in South Asia? IFPRI Division Discussion Paper. No. 200

Stipek, D. (2002). At what age should children enter Kindergarten: A question for policy makers and parents. SRDC Social Policy Report. Vol. 16, No. 2, 3 - 16

Stromquist,N.P. (1993) The Theoretical and Practical bases for Empowerment, in Medel-Anonuevo,C. (Ed.) (1993). Women, Education and Empowerment: Pathways towards Autonomy. UNESCO Institute for Education: Hamburg.

Thomas, D. (1990). Intra-household resource allocation: An inferential approach. Journal of Human Resources. Vol. 25, No. 4, 635 - 664

Thomas, D., Contreras, D. and Frankenberg, E. (2002). Distribution of power within the household and child health. mimeo. RAND, Santa Monica, USA

Tilak, J. B. (2002). Education poverty in India. Review of Development and Change. Vol. 7, No. 1, 1 - 44

United Nation Children's Fund. (2008). State of the World's Children 2008. Hatteras Press

Vlassoff, C. (1992). Progress and Stagnation: changes in fertility and women's position in an Indian Village. Population Studies. Vol. 46, No. 2, 195 - 212

Yount, K. M., Langsten, R. and Hill, K. (2000). The effect of gender preference on contraceptive use in fertility in rural Egypt. Studies in family planning. Vol. 31, No. 4, 290 - 300

Table 1: Distribution of Starting school age, percentages

STATES	Age When School Started						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	6	7	8	9	10	11	Censored Observations
All India	70	10	4	1	0.3	0.02	14
Andhra Pradesh (AP)	81	8	2	0.2	0.04	-	9
Bihar	35	14	8	3	1	0.1	38
Gujarat	85	6	2	0.2	0.2	-	7
Haryana	77	8	2	1	0.2	-	12
Karnataka	84	7	1	0.5	0.2	0.1	7
Kerala	97	2	0.1	0.3	-	-	0.7
Madhya Pradesh (MP)	69	10	4	1	0.3	-	15
Maharashtra	85	7	2	0.4	0.03	-	5
Orissa	80	7	3	1	-	-	10
Punjab	73	13	4	0.7	0.2	-	10
Rajasthan	63	11	5	1	0.3	-	19
Tamil Nadu (TN)	96	2	1	-	-	-	1
West Bengal (WB)	63	15	7	2	0.2	-	14
Uttar Pradesh (UP)	57	14	7	2	0.4	0.02	19
North Eastern States (NE)	64	12	6	2	0.4	0.1	17

Notes: (i) The percentages are based on the sample of children aged 6-11 at the beginning of the academic year April 2005. (ii) The North Eastern states are Arunachal Pradesh, Assam, Nagaland, Manipur, Mizoram and Meghalaya. (iii) Column (1): children entered school at age 6; column (2): children entered school at age 7; column (3): children entered school at age 8; column (4): children entered school at age 9; column (5): children entered school at age 10; column (6): children entered school at age 11; column (7): children never having attended school

Table 2: Logistic Regression for the Probability of Dropping out of School. Coefficient Estimates (Standard Errors)

	Variable	Urban	Rural	No. of Children	No. of Mothers	States	Urban	Rural	No. of Children	No. of Mothers
All India	SSA	0.257*** (0.001)	0.138*** (0.001)	41,282	28,610	Maharashtra	0.371*** (0.001)	0.318*** (0.002)	4,691	2,147
	SSA*girl	0.017 (0.286)	0.046*** (0.001)				0.088** (0.013)	0.083* (0.064)		
AP	SSA	-0.136 (0.383)	0.148 (0.180)	3,519	1,728	Orissa	0.407*** (0.002)	0.281*** (0.001)	2,267	1,017
	SSA*girl	-0.011 (0.856)	0.174*** (0.001)				0.009 (0.859)	-0.009 (0.799)		
Bihar	SSA	-0.203 (0.523)	0.204* (0.069)	2,325	808	Punjab	0.694** (0.047)	0.251** (0.042)	2,191	952
	SSA*girl	-0.102 (0.545)	-0.005 (0.913)				-0.173 (0.203)	0.107* (0.051)		
Gujarat	SSA	0.365** (0.023)	0.0952 (0.434)	2,019	889	Rajasthan	0.365** (0.020)	0.116 (0.159)	2,665	1,008
	SSA*girl	0.045 (0.502)	0.105** (0.045)				0.092 (0.201)	0.109*** (0.005)		
Haryana	SSA	-0.0339 (0.916)	0.323** (0.011)	1,861	769	TN	0.506*** (0.008)	0.260* (0.079)	2,532	1,349
	SSA*girl	-0.111 (0.499)	0.068 (0.283)				0.066 (0.360)	0.175** (0.013)		
Karnataka	SSA	0.365 (0.104)	0.0437 (0.781)	2,894	1,359	WB	0.797*** (0.001)	0.384*** (0.001)	3,289	1,629
	SSA*girl	0.034 (0.705)	0.101* (0.094)				0.008 (0.925)	-0.130*** (0.005)		
Kerala	SSA	1.240* (0.065)	0.848*** (0.005)	1,479	815	UP	0.228*** (0.002)	0.0747 (0.168)	8,390	2,848
	SSA*girl	-0.326 (0.213)	-0.009 (0.944)				0.0277 (0.459)	0.036 (0.160)		
MP	SSA	0.295* (0.096)	0.192* (0.076)	3,662	1,531	NE	0.366*** (0.001)	0.233*** (0.001)	10,331	4,150
	SSA*girl	0.038 (0.594)	0.110** (0.018)				-0.074 (0.182)	0.042 (0.139)		

Notes: (i) The above model is estimated using the sample of children aged 6-11 at the interview time. SSA is the School-Starting Age and SSA*girl refers to the interaction with the gender dummy. (ii) North-Eastern states are: Arunachal Pradesh, Assam, Nagaland, Manipur, Mizoram and Meghalaya. (iii) *, **, *** coefficient significant at 10%, 5% and 1% respectively. (iv) Standard errors in parentheses

Table 3: Children's and Parents' Educational Attainments, Percentages

	Children's Educational Attainments				
	(1)	(2)	(3)	(4)	(5)
STATES	Never attended School	Entered	Advanced	Repeating	Dropped out
All India	13	7	76	2	1
Andhra Pradesh (AP)	8	4	85	1	1
Bihar	36	13	49	0.2	1
Gujarat	6	2	85	5	1
Haryana	10	6	81	2	0.2
Karnataka	6	7	82	1	1
Kerala	1	5	93	1	0.3
Madhya Pradesh (MP)	13	8	75	2	1
Maharashtra	5	7	86	1	0.5
Orissa	9	5	81	3	1
Punjab	9	8	80	1	1
Rajasthan	18	8	71	1	1
Tamil Nadu (TN)	1	3	96	1	0.1
West Bengal (WB)	14	10	72	3	1
Uttar Pradesh (UP)	18	10	69	2	1
North Eastern States (NE)	15	6	74	3	0.3

	Mothers' Educational Attainments			
	(6)	(7)	(8)	(9)
STATES	No Education	Primary Education	Secondary Education	Tertiary Education
All India	47	16	31	6
Andhra Pradesh (AP)	46	14	34	6
Bihar	72	8	17	2
Gujarat	46	15	33	6
Haryana	58	12	27	3
Karnataka	49	14	34	4
Kerala	3	11	71	16
Madhya Pradesh (MP)	57	15	21	7
Maharashtra	28	16	46	10
Orissa	52	21	24	3
Punjab	40	16	38	6
Rajasthan	77	9	10	4
Tamil Nadu (TN)	27	28	37	8
West Bengal (WB)	48	20	27	6
Uttar Pradesh (UP)	69	10	16	6
North Eastern States (NE)	36	20	39	5

	Fathers' Educational Attainments			
	(10)	(11)	(12)	(13)
STATES	No Education	Primary Education	Secondary Education	Tertiary Education
All India	26	19	44	11
Andhra Pradesh (AP)	31	18	39	12
Bihar	40	11	37	11
Gujarat	21	20	50	9
Haryana	26	12	54	8
Karnataka	30	20	40	9
Kerala	3	17	68	12
Madhya Pradesh (MP)	30	20	36	14
Maharashtra	14	19	52	15
Orissa	32	26	32	8
Punjab	25	14	53	8
Rajasthan	38	17	35	9
Tamil Nadu (TN)	17	28	46	10
West Bengal (WB)	34	22	34	9
Uttar Pradesh (UP)	31	16	42	11
North Eastern States (NE)	23	20	46	11

Notes: (i) The percentages are based on the sample of children aged 6-11 at the beginning of the academic year April 2005. (ii) The North Eastern states are Arunachal Pradesh, Assam, Nagaland, Manipur, Mizoram and Meghalaya. (iii) Column (1): child has never attended school; column (2): child has entered school at the beginning of the academic year April 2005; column (3): child has advanced to the next grade at the beginning of the academic year April 2005; column (4): child did not advance to the next grade at the beginning of the academic year April 2005 and must repeat year; column (5): child dropped out of school at the beginning of the academic year April 2005; column (6): woman has never attended school; column (7): woman has either incomplete primary education or complete primary education; column (8): woman has either incomplete secondary education or complete secondary education; column (9): woman has tertiary education; column (10): woman's partner has never attended school; column (11): woman's partner has either incomplete primary education or complete primary education; column (12): woman's partner has either incomplete secondary education or complete secondary education; column (13): woman's partner has tertiary education

Table (4): Economic Autonomy, Percentages

STATES	(1) Woman decides on husband's money	(2) Woman has money for own use	(3) Woman has bank account
All India	71	45	15
Andhra Pradesh (AP)	56	59	19
Bihar	71	63	11
Gujarat	69	60	20
Haryana	74	35	11
Karnataka	58	59	22
Kerala	61	22	31
Madhya Pradesh (MP)	72	47	12
Maharashtra	76	44	23
Orissa	70	38	11
Punjab	72	28	14
Rajasthan	62	33	7
Tamil Nadu (TN)	78	24	17
West Bengal (WB)	58	38	15
Uttar Pradesh (UP)	80	65	13
North Eastern States (NE)	76	33	13

Notes: (i) The percentages are based on the sample of women with children aged 6-11 at the beginning of the academic year April 2005. (ii) The North Eastern states are Arunachal Pradesh, Assam, Nagaland, Manipur, Mizoram and Meghalaya. (iii) Column (1): Woman decides either herself or jointly with her husband on what to do with husband's money; column (2): woman has money for her own that she alone can decide how to use; column (3): woman has a bank or savings account that she can use herself.

Table (5): Decision-Making Autonomy, Percentages

STATES	(1) Woman decides on own health care	(2) Woman decides on household purchases	(3) Woman can go to the market	(4) Woman can go outside the community
All India	70	74	91	94
Andhra Pradesh (AP)	64	65	87	95
Bihar	61	77	90	88
Gujarat	61	75	97	96
Haryana	73	72	95	88
Karnataka	51	63	81	99
Kerala	75	73	80	85
Madhya Pradesh (MP)	57	69	97	98
Maharashtra	68	78	91	90
Orissa	67	71	86	96
Punjab	76	65	97	90
Rajasthan	54	62	98	98
Tamil Nadu (TN)	72	80	97	93
West Bengal (WB)	61	57	80	91
Uttar Pradesh (UP)	72	76	91	95
North Eastern States (NE)	79	83	95	96

Notes: (i) The percentages are based on the sample of women with children aged 6-11 at the beginning of the academic year April 2005. (ii) The North Eastern states are Arunachal Pradesh, Assam, Nagaland, Manipur, Mizoram and Meghalaya. (iii) Column (1): woman decides alone or jointly with husband on own health care; column (2) woman decides alone or jointly with husband on large and small household purchases, column (3) woman is allowed to go alone or jointly with someone else to the market; column (4) woman is allowed to go alone or jointly with someone else to places outside the community

Table (6): Emotional Autonomy, Percentages:

STATES	(1) Woman believes her husband is not justified beating her if she goes out without telling him	(2) Woman believes her husband is not justified beating her if she neglects the house and children	(3) Woman believes her husband is not justified beating her if she argues with him	(4) Woman believes her husband is not justified beating her if she refuses sex	(5) Woman believes her husband is not justified beating her if she burns the food
All India	67	60	66	82	81
Andhra Pradesh (AP)	55	50	61	72	73
Bihar	75	79	66	85	82
Gujarat	62	55	55	74	66
Haryana	63	67	64	73	73
Karnataka	53	46	61	67	69
Kerala	63	55	73	83	78
Madhya Pradesh (MP)	79	78	75	89	82
Maharashtra	79	64	74	82	80
Orissa	57	56	57	82	73
Punjab	67	64	64	76	75
Rajasthan	63	65	61	83	72
Tamil Nadu (TN)	51	37	56	81	71
West Bengal (WB)	81	74	76	86	87
Uttar Pradesh (UP)	75	72	72	90	82
North Eastern States (NE)	60	44	64	81	80

STATES	(6) Woman believes her husband is not justified beating her if she is unfaithful	(7) Woman believes her husband is not justified beating her if she is disrespectful	(8) Woman believes she is justified refusing sex if husband has other women	(9) Woman believes she is justified refusing sex if husband has sexually transmitted disease	(10) Woman believes she is justified refusing sex if she is tired
All India	69	54	81	82	80
Andhra Pradesh (AP)	57	47	80	78	77
Bihar	72	65	91	86	80
Gujarat	63	55	74	77	69
Haryana	61	57	87	83	79
Karnataka	57	43	82	79	78
Kerala	76	56	75	76	72
Madhya Pradesh (MP)	72	62	91	92	92
Maharashtra	80	58	71	75	75
Orissa	60	47	56	75	76
Punjab	58	55	85	85	79
Rajasthan	70	51	91	92	87
Tamil Nadu (TN)	85	51	73	79	78
West Bengal (WB)	84	65	75	69	75
Uttar Pradesh (UP)	74	62	85	88	89
North Eastern States (NE)	62	44	81	82	76

Notes: (i) The percentages are based on the sample of women with children aged 6-11 at the beginning of the academic year April 2005. (ii) The North Eastern states are Arunachal Pradesh, Assam, Nagaland, Manipur, Mizoram and Meghalaya. (iii) Column (1) woman believes her husband is not justified in beating her if she argues with him; column (2) woman believes her husband is not justified in beating her if she is disrespectful; column (3) woman believes her husband is not justified in beating her if she goes out without telling him; column (4) woman believes her husband is not justified in beating her if he suspects her of being unfaithful; column (5) woman believes her husband is not justified in beating her if she neglects the house of children; column (6) woman believes her husband is not justified in beating her if she refuses to have sex with him; column (7) woman believes her husband is not justified in beating her if she does not cook the food properly; column (8) woman believes she is justified in refusing sex if husband has sexually transmitted disease; column (9) woman believes she is justified in refusing sex if husband has other women; column (10) woman believes she is justified in refusing sex if she is tired

Table (7): Traditional Female Autonomy Indices, Means and Standard Deviations

	Autonomy Indices			
	(1)	(2)	(3)	(4)
	Economic Autonomy Maximal value = 3	Decision Making Autonomy Maximal value = 4	Emotional Autonomy Maximal value =10	Female Autonomy Maximal value = 17
All India	1.32	3.27	7.22	11.81
(SD)	(0.85)	(0.93)	(2.62)	(3.22)
Andhra Pradesh (AP)	1.27	3.05	6.36	10.69
(SD)	(0.87)	(1.01)	(2.98)	(3.56)
Bihar	1.45	3.16	7.85	12.46
(SD)	(0.78)	(1.01)	(2.25)	(2.91)
Gujarat	1.52	3.31	6.73	11.55
(SD)	(0.91)	(0.83)	(2.94)	(3.60)
Haryana	1.2	3.28	7.19	11.67
(SD)	(0.76)	(0.90)	(3.01)	(3.53)
Karnataka	1.4	2.95	6.36	10.71
(SD)	(0.91)	(1.00)	(2.74)	(3.41)
Kerala	1.17	3.14	7.10	11.41
(SD)	(0.92)	(1.00)	(2.43)	(3.08)
Madhya Pradesh (MP)	1.38	3.26	8.22	12.86
(SD)	(0.84)	(0.91)	(2.27)	(3.04)
Maharashtra	1.48	3.28	7.52	12.28
(SD)	(0.92)	(0.87)	(2.49)	(3.20)
Orissa	1.2	3.18	6.42	10.80
(SD)	(0.82)	(0.90)	(2.86)	(3.47)
Punjab	1.16	3.30	7.18	11.65
(SD)	(0.85)	(0.88)	(2.65)	(3.20)
Rajastan	1.04	3.13	7.34	11.51
(SD)	(0.81)	(0.92)	(2.58)	(3.16)
Tamil Nadu (TN)	1.21	3.42	6.61	11.24
(SD)	(0.76)	(0.79)	(2.28)	(2.69)
West Bengal (WB)	1.14	2.88	7.79	11.81
(SD)	(0.89)	(1.06)	(2.64)	(3.44)
Uttar Pradesh (UP)	1.57	3.34	7.93	12.84
(SD)	(0.78)	(0.91)	(2.40)	(2.95)
North Eastern States	1.23	3.51	6.78	11.53
(SD)	(0.81)	(0.81)	(2.45)	(2.91)

Notes: (i) The percentages are based on the sample of women with children aged 6-11 at the beginning of the academic year April 2005. (ii) The North Eastern states are Arunachal Pradesh, Assam, Nagaland, Manipur, Mizoram and Meghalaya. (iii) Column (1): addition of variables laid out in table (4), takes values 0 to 3; column (2): addition of variables laid out in table (5), takes values 0 to 4; column (3): addition of variables laid out in table (6), takes values 0 to 10; column (4): addition of columns (1), (2) and (3), takes values 0 to 17.

Figure 1: Path Diagram
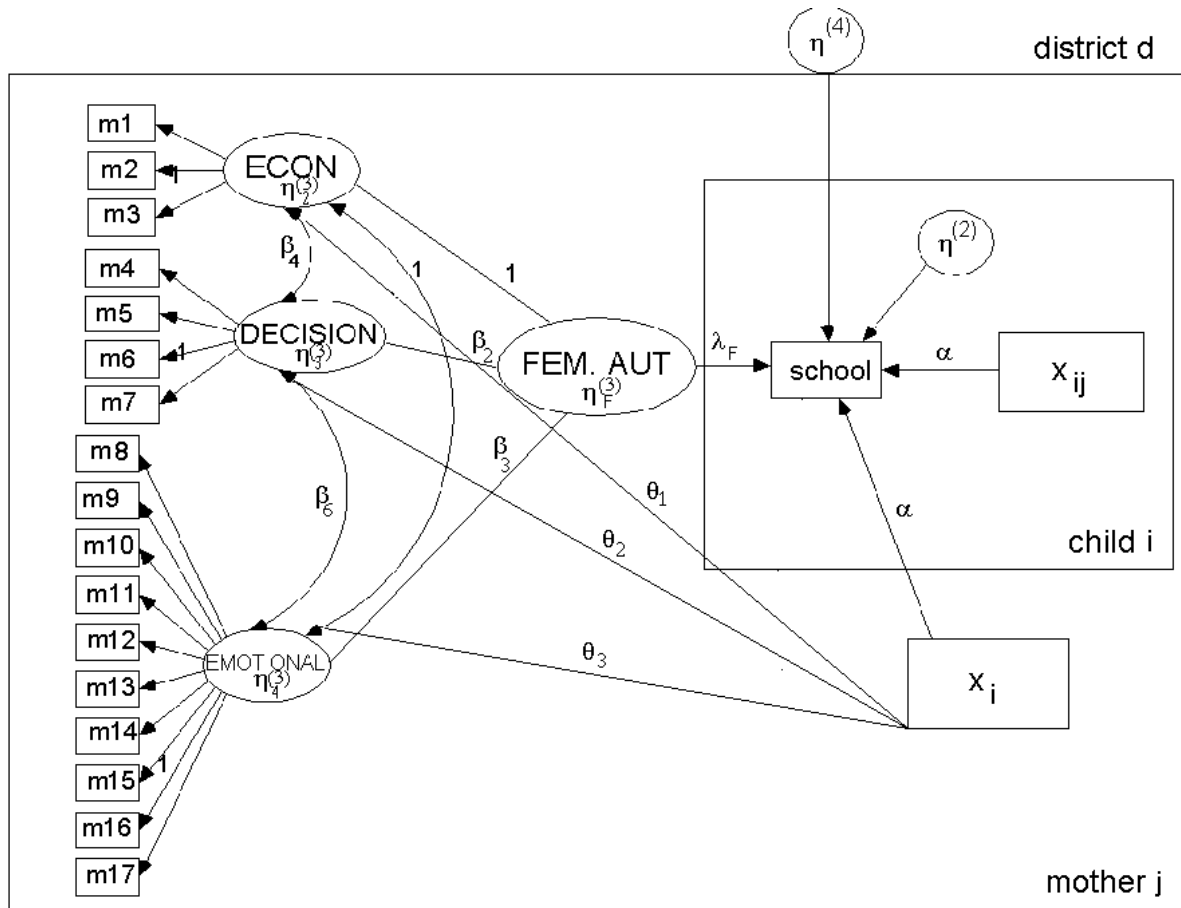
Notes: (i) path diagram represents workings of our structural equation model consisting of equations (5), (7) and (8). (ii) m1 to m17 refer to female autonomy measurements laid out in Appendix (1). (iii) Squares refer to observed variables and circles to latent variables. (iv) Single-headed arrows refer to coefficients or factor loadings, double-headed arrows to correlations (v) β_1 to β_6 and θ_1 to θ_3 refer to the structural model in Appendix (2). (vi) λ_F and α refer to the measurement model in Appendix (2). (vii) district d, mother j and child ij refer to clusters at district, mother and child levels

Figure 2: Kernel Densities of the Bayes' Shrinkage Estimates for the four Latent Variables:
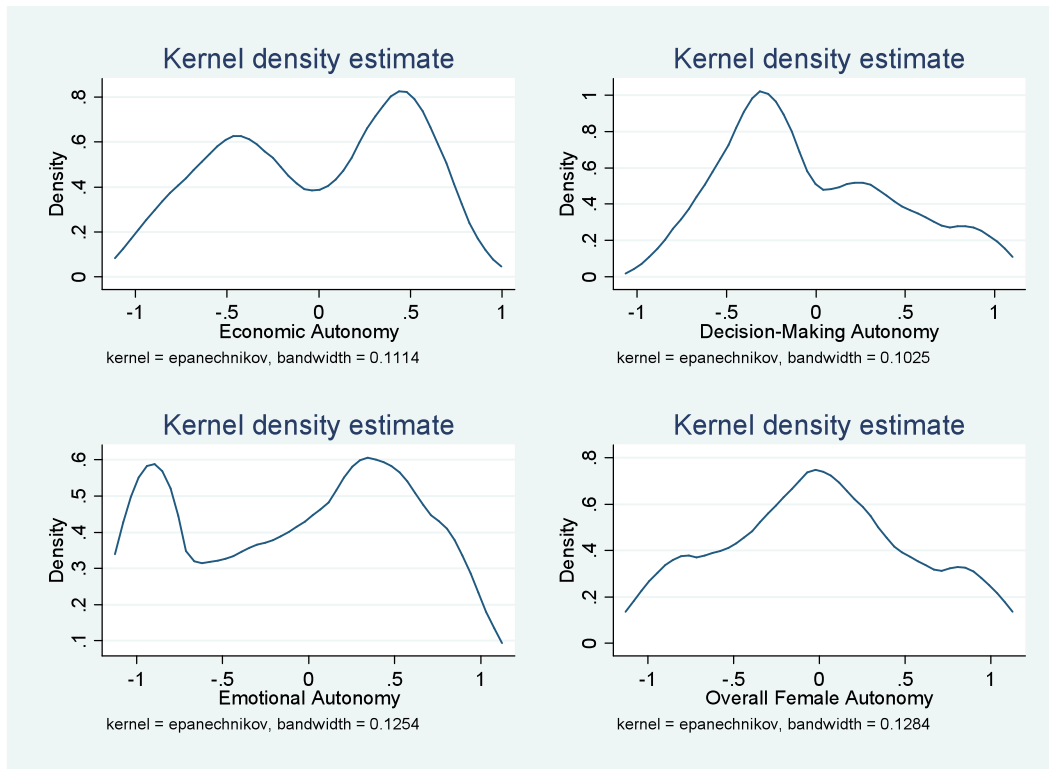
Notes: (i) Kernel Densities refer to the latent factors of the Structural Equation Model laid out in equations (5), (7) and (8) and summarised in Figure 1. (ii) Economic Autonomy is measured by m1 to m3 in Appendix (1) and refers to $\eta^{(3)}_{2j}$; Decision-Making is measured by m4 to m7 in Appendix (1) and refers to $\eta^{(3)}_{3j}$; Emotional is measured by m8 to m17 in Appendix (1) and refers to $\eta^{(3)}_{4j}$; Overall Female Autonomy refers to $\eta^{(3)}_{Fj}$.

Table (8): Summary of Estimates of Models (1), (2) and (3), Coefficients (Standard Error):

	All India			AP			Bihar		
Model:	1)	2)	3)	1)	2)	3)	1)	2)	3)
Female Autonomy	-	0.020***	0.725***	-	0.008	1.001***	-	0.027*	1.462***
		(0.004)	(0.166)		(0.009)	(0.313)		(0.015)	(0.128)
…									
Age Interval 6-7	-0.421***	-0.422***	-0.501***	-0.795*	-0.901***	-0.818	-0.153	-0.149	0.541***
	(0.038)	(0.038)	(0.078)	(0.456)	(0.310)	(0.505)	(0.096)	(0.096)	(0.172)
Age Interval 7-8	-0.025	-0.026	-0.045	-1.124*	-1.273***	-1.150	0.178	0.185	1.496***
	(0.057)	(0.057)	(0.060)	(0.645)	(0.483)	(0.720)	(0.125)	(0.125)	(0.245)
Age Interval 8-9	-0.333***	-0.334***	-0.487***	-2.671***	-2.835***	-2.695***	-0.050	-0.042	1.642***
	(0.078)	(0.078)	(0.065)	(0.803)	(0.684)	(0.873)	(0.175)	(0.175)	(0.308)
Age Interval 9-10	-0.907***	-0.912***	-1.103***	-3.413***	-3.576***	-3.452***	0.093	0.102	2.231***
	(0.132)	(0.132)	(0.115)	(1.237)	(1.158)	(1.284)	(0.298)	(0.298)	(0.443)
Age Interval 10-11	-0.828**	-0.836**	-0.935***				0.591	0.599	3.562***
	(0.422)	(0.423)	(0.271)				(0.922)	(0.924)	(1.233)

	Gujarat			Haryana			Karnataka		
Model:	1)	2)	3)	1)	2)	3)	1)	2)	3)
Female Autonomy	-	0.015	-0.114	-	0.060***	1.283***	-	0.005	0.101
		(0.024)	(0.091)		(0.023)	(0.230)		(0.019)	(0.182)
…									
Age Interval 6-7	-1.108***	-1.095***	-1.671***	-0.975***	-0.949***	-0.207	-0.995***	-0.995***	-0.995***
	(0.251)	(0.253)	(0.182)	(0.270)	(0.253)	(0.323)	(0.155)	(0.155)	(0.155)
Age Interval 7-8	-0.589	-0.573	-1.510***	-0.917**	-0.889**	0.113	-2.104***	-2.105***	-2.107***
	(0.371)	(0.373)	(0.262)	(0.406)	(0.378)	(0.420)	(0.270)	(0.270)	(0.270)
Age Interval 8-9	-2.538***	-2.518***	-3.634***	-0.971*	-0.974**	0.197	-2.349***	-2.349***	-2.352***
	(0.718)	(0.718)	(0.640)	(0.518)	(0.489)	(0.499)	(0.391)	(0.391)	(0.391)
Age Interval 9-10	-2.033**	-2.022**	-3.215***	-1.771**	-1.802**		-2.742***	-2.743***	-2.741***
	(0.909)	(0.909)	(0.830)	(0.872)	(0.853)		(0.631)	(0.631)	(0.631)
Age Interval 10-11							-1.508	-1.505	-1.515
							(1.172)	(1.172)	(1.174)

	Kerala			Madhya Pradesh			Maharashtra		
Model:	1)	2)	3)	1)	2)	3)	1)	2)	3)
Female Autonomy	-	0.122*	-0.000	-	-0.004	2.585***	-	0.031*	1.021***
		(0.065)	(0.011)		(0.015)	(0.206)		(0.017)	(0.223)
…									
Age Interval 6-7	-0.390	-0.246	-1.313**	-0.683***	-0.685***	1.528***	-0.686***	-0.725***	-0.702***
	(0.841)	(0.873)	(0.546)	(0.127)	(0.127)	(0.248)	(0.217)	(0.207)	(0.217)
Age Interval 7-8	-2.445*	-2.110	-3.749***	-0.464**	-0.467**	2.775***	-0.569*	-0.620*	-0.591*
	(1.481)	(1.475)	(1.369)	(0.192)	(0.192)	(0.362)	(0.330)	(0.321)	(0.332)
Age Interval 8-9	0.892	1.183	0.204	-0.698***	-0.699***	3.162***	-1.269***	-1.314***	-1.284***
	-0.699	(1.628)	(1.343)	(0.268)	(0.268)	(0.456)	(0.458)	(0.451)	(0.460)
Age Interval 9-10				-1.181**	-1.183**	2.805***	-3.119***	-3.180***	-3.118***
				(0.489)	(0.489)	(0.629)	(1.119)	(1.120)	(1.121)
Age Interval 10-11									

	Orissa			Punjab			Rajastan		
Model:	**1)**	**2)**	**3)**	**1)**	**2)**	**3)**	**1)**	**2)**	**3)**
Female Autonomy	-	0.037	-1.427***	-	0.038**	0.660***	-	-0.010	2.365***
		(0.026)	(0.200)		(0.018)	(0.090)		(0.017)	(0.224)
…									
Age Interval 6-7	-0.320	-0.359	-0.247	-0.338**	-0.334**	-0.579***	-0.475***	-0.472***	1.439***
	(0.243)	(0.241)	(0.267)	(0.146)	(0.146)	(0.137)	(0.157)	(0.156)	(0.267)
Age Interval 7-8	0.002	-0.056	0.078	-0.322	-0.320	-0.745***	-0.077	-0.073	2.867***
	(0.329)	(0.330)	(0.380)	(0.231)	(0.230)	(0.214)	(0.237)	(0.235)	(0.401)
Age Interval 8-9	-0.218	-0.279	-0.020	-1.300***	-1.307***	-1.759***	-0.752**	-0.752**	2.690***
	(0.429)	(0.430)	(0.489)	(0.423)	(0.424)	(0.402)	(0.326)	(0.324)	(0.490)
Age Interval 9-10				-1.745**	-1.780**	-2.406***	-1.324**	-1.316**	2.249***
				(0.788)	(0.789)	(0.766)	(0.561)	(0.559)	(0.719)
Age Interval 10-11									

	Tamil Nadu			West Bengal			Uttar Pradesh		
Model:	**1)**	**2)**	**3)**	**1)**	**2)**	**3)**	**1)**	**2)**	**3)**
Female Autonomy	-	-0.009	-2.447***	-	0.014	0.557***	-	0.008	1.001***
		(0.051)	(0.412)		(0.014)	(0.191)		(0.009)	(0.313)
…									
Age Interval 6-7	-1.302***	-1.302***	-0.436	-0.122	-0.118	-0.134	-0.304***	-0.302***	-0.304***
	(0.378)	(0.378)	(0.439)	(0.149)	(0.148)	(0.145)	(0.103)	(0.104)	(0.103)
Age Interval 7-8	-1.066**	-1.067**	-0.091	0.441*	0.449*	0.426*	0.230	0.232	0.229
	(0.508)	(0.508)	(0.575)	(0.241)	(0.239)	(0.235)	(0.172)	(0.174)	(0.172)
Age Interval 8-9				-0.062	-0.052	-0.081	0.036	0.039	0.035
				(0.336)	(0.334)	(0.330)	(0.222)	(0.224)	(0.222)
Age Interval 9-10				-0.757	-0.750	-0.781	-0.665**	-0.661**	-0.666**
				(0.581)	(0.579)	(0.577)	(0.320)	(0.322)	(0.320)
Age Interval 10-11							-0.378	-0.384	-0.378
							(1.194)	(1.194)	(1.194)

|	NE States		
Model:	**1)**	**2)**	**3)**
Female Autonomy	-	0.024***	2.417***
		(0.009)	(0.047)
…			
Age Interval 6-7	-0.119	-0.117	-0.121
	(0.077)	(0.077)	(0.076)
Age Interval 7-8	0.534***	0.539***	0.528***
	(0.113)	(0.113)	(0.113)
Age Interval 8-9	0.490***	0.495***	0.482***
	(0.158)	(0.157)	(0.157)
Age Interval 9-10	0.111	0.112	0.097
	(0.258)	(0.258)	(0.257)
Age Interval 10-11	0.640	0.637	0.602
	(0.632)	(0.633)	(0.632)

Notes: (i) Estimates are based on the sample of women with children aged 6-11 at the beginning of the academic year April 2005. (ii) Dependent Variable: Dummy whether child enters school; (iii) Column 1): model (1), duration specification without female autonomy variable, Column 2): model (2), duration specification with female autonomy indices, Column 3): model (3), structural equation model specification. (iv) Standard Errors reported in parentheses; (v) * $p<0.1$, ** $p<0.05$, *** $p<0.01$; (vi) Coefficients for child, parent and household level not reported, remaining coefficients reported in the Appendix (3).

Table (9): Estimates for Covariate and Structural Model for Andhra Pradesh, Bihar, Madhya Pradesh and Kerala, Coefficients (Standard Errors)

Andhra Pradesh	1) Model 1) School	2) Model 2) School	3) Model 3) School	4) Model 3) Economic Aut	5) Model 3) Dec-Making Aut	6) Model 3) Emotional Aut
Female Autonomy	-	0.025 (0.018)	0.898*** (0.229)	1.000 (0.000)	0.786*** (0.079)	-0.998*** (0.236)
Caste:						
Scheduled Caste	-0.165 (0.224)	-0.167 (0.217)	-0.173 (0.222)	1.000 (0.000)	1.000 (0.000)	1.000 (0.000)
Scheduled Tribe	-0.749*** (0.259)	-0.756*** (0.250)	-0.752*** (0.257)	0.253*** (0.082)	0.346*** (0.101)	-0.210 (0.256)
Other Backward Caste	-0.324* (0.181)	-0.330* (0.173)	-0.329* (0.178)	0.073 (0.049)	-0.007 (0.059)	-0.826*** (0.151)
Religion:						
Muslim	-0.814*** (0.257)	-0.792*** (0.202)	-0.794*** (0.249)	-0.182*** (0.052)	-0.229*** (0.064)	1.287*** (0.162)
Highest Education:						
Ma: Completed Prim.	0.106*** (0.038)	0.098*** (0.033)	0.106*** (0.038)	0.026*** (0.009)	0.016 (0.012)	0.101*** (0.029)
Pa: Completed Prim.	0.292** (0.136)	0.276** (0.128)	0.285** (0.137)	-0.122*** (0.042)	-0.163*** (0.051)	0.311** (0.130)
Pa: Completed Sec.	0.939*** (0.278)	0.889*** (0.264)	0.923*** (0.279)	0.153** (0.065)	-0.087 (0.079)	0.810*** (0.202)
Wealth:						
2nd Quintile	0.211 (0.235)	0.194 (0.228)	0.194 (0.234)	0.217*** (0.082)	0.006 (0.100)	0.093 (0.255)
3rd Quintile	0.409* (0.229)	0.373* (0.216)	0.389* (0.229)	0.217*** (0.076)	0.109 (0.093)	0.068 (0.236)
4th Quintile	0.502** (0.241)	0.465** (0.233)	0.471* (0.241)	0.375*** (0.080)	0.192** (0.097)	0.490** (0.248)
5th Quintile	0.912*** (0.301)	0.859*** (0.288)	0.867*** (0.303)	0.433*** (0.091)	0.249** (0.111)	0.800*** (0.282)
Rural Household	0.370** (0.172)	0.395** (0.165)	0.340** (0.171)	-0.010 (0.045)	-0.179*** (0.054)	-1.014*** (0.138)
Child Characteristics:						
Girl	0.115 (0.147)	0.097 (0.142)	0.120 (0.147)			
Nr. of Older Brothers	-0.299** (0.134)	-0.289** (0.125)	-0.291** (0.134)			
Nr. of Older Sisters	-0.042 (0.105)	-0.032 (0.101)	-0.045 (0.104)			
Nr. of Younger Brothers	-0.085 (0.125)	-0.092 (0.120)	-0.081 (0.125)			
Nr. of Younger Sisters	0.205 (0.134)	0.197 (0.128)	0.208 (0.133)			
Initial Conditions:						
Aged 6 in 2003	-0.127 (0.145)	-0.115 (0.138)	-0.127 (0.144)			
Aged 6 in 2004	-0.278* (0.155)	-0.259* (0.145)	-0.267* (0.154)			
Aged 6 in 2005	-1.246*** (0.300)	-1.204*** (0.246)	-1.236*** (0.311)			
Shape of Hazard:						
Age Interval 6-7	-0.795* (0.456)	-0.901*** (0.310)	-0.818 (0.505)			
Age Interval 7-8	-1.124* (0.645)	-1.273*** (0.483)	-1.150 (0.720)			
Age Interval 8-9	-2.671*** (0.803)	-2.835*** (0.684)	-2.695*** (0.873)			
Age Interval 9-10	-3.413*** (1.237)	-3.576*** (1.158)	-3.452*** (1.284)			
Age Interval 10-11						

Bihar	1) Model 1) School	2) Model 2) School	3) Model 3) School	4) Model 3) Economic Aut	5) Model 3) Dec-Making Aut	6) Model 3) Emotional Aut
Female Autonomy	-	0.027* (0.015)	1.462*** (0.128)	1.000 (0.000)	1.391*** (0.097)	-1.667*** (0.110)
Caste:						
Scheduled Caste	-0.379** (0.165)	-0.384** (0.165)	-4.565*** (0.348)	1.000 (0.000)	1.000 (0.000)	1.000 (0.000)
Scheduled Tribe	-1.848* (1.083)	-1.924* (1.084)	-1.858* (1.085)	-2.807*** (0.967)	-0.063 (1.280)	0.454 (0.463)
Other Backward Caste	-0.199 (0.126)	-0.210* (0.126)	-0.200 (0.126)	-0.532*** (0.070)	-0.599*** (0.084)	0.136** (0.061)
Religion:						
Muslim	-0.760*** (0.130)	-0.779*** (0.129)	-2.664*** (0.392)	-0.095 (0.127)	0.198 (0.178)	0.139* (0.080)
Highest Education:						
Ma: Completed Prim.	0.109*** (0.029)	0.106*** (0.029)	2.990*** (0.443)	-0.002 (0.031)	-0.182*** (0.043)	0.139*** (0.023)
Pa: Completed Prim.	0.453*** (0.096)	0.453*** (0.095)	0.453*** (0.096)	0.072 (0.065)	0.082 (0.094)	-0.005 (0.075)
Pa: Completed Sec.	0.539*** (0.177)	0.539*** (0.177)	0.540*** (0.177)	0.043 (0.128)	0.132 (0.169)	-0.077 (0.139)
Wealth:						
2nd Quintile	0.514*** (0.110)	0.506*** (0.111)	0.513*** (0.111)	-0.645*** (0.073)	0.263** (0.107)	-0.422*** (0.077)
3rd Quintile	0.877*** (0.132)	0.865*** (0.132)	0.876*** (0.132)	-1.283*** (0.117)	-0.782*** (0.168)	-0.326*** (0.093)
4th Quintile	0.858*** (0.162)	0.828*** (0.163)	0.857*** (0.162)	-1.550*** (0.126)	-1.001*** (0.179)	-0.275*** (0.105)
5th Quintile	1.305*** (0.216)	1.261*** (0.217)	1.302*** (0.217)	-1.605*** (0.157)	-0.940*** (0.211)	0.017 (0.152)
Rural Household	0.120 (0.126)	0.111 (0.123)	0.120 (0.125)	-0.795*** (0.062)	-0.217** (0.086)	-0.952*** (0.058)
Child Characteristics:						
Girl	-0.438*** (0.099)	-0.443*** (0.100)	-0.438*** (0.099)			
Nr. of Older Brothers	-0.015 (0.075)	-0.013 (0.075)	-0.015 (0.075)			
Nr. of Older Sisters	0.003 (0.061)	0.010 (0.061)	0.004 (0.061)			
Nr. of Younger Brothers	-0.139* (0.076)	-0.129* (0.076)	-0.138* (0.076)			
Nr. of Younger Sisters	-0.129 (0.082)	-0.121 (0.082)	-0.129 (0.082)			
Initial Conditions:						
Aged 6 in 2003	0.004 (0.106)	-0.004 (0.106)	0.003 (0.106)			
Aged 6 in 2004	0.545*** (0.118)	0.539*** (0.118)	0.545*** (0.118)			
Aged 6 in 2005	0.387 (0.247)	0.395 (0.248)	0.388			
Shape of Hazard:						
Age Interval 6-7	-0.153 (0.096)	-0.149 (0.096)	0.541*** (0.172)			
Age Interval 7-8	0.178 (0.125)	0.185 (0.125)	1.496*** (0.245)			
Age Interval 8-9	-0.050 (0.175)	-0.042 (0.175)	1.642*** (0.308)			
Age Interval 9-10	0.093 (0.298)	0.102 (0.298)	2.231*** (0.443)			
Age Interval 10-11	0.591 (0.922)	0.599 (0.924)	3.562*** (1.233)			

Madhya Pradesh	1) Model 1) School	2) Model 2) School	3) Model 3) School	4) Model 3) Economic Aut	5) Model 3) Dec-Making Aut	6) Model 3) Emotional Aut
Female Autonomy	-	-0.004 (0.015)	2.585*** (0.206)	1.000 (0.000)	1.665*** (0.074)	-1.252*** (0.074)
Caste:						
Scheduled Caste	-0.474*** (0.172)	-0.475*** (0.172)	-4.319*** (0.457)	1.000 (0.000)	1.000 (0.000)	1.000 (0.000)
Scheduled Tribe	-0.924*** (0.178)	-0.923*** (0.178)	2.217*** (0.859)	-1.864*** (0.248)	-0.551*** (0.163)	0.360*** (0.085)
Other Backward Caste	-0.295** (0.146)	-0.296** (0.146)	1.891*** (0.646)	-0.896*** (0.175)	-0.267** (0.124)	0.257*** (0.060)
Religion:						
Muslim	-0.435** (0.181)	-0.434** (0.181)	0.811 (1.019)	-0.708** (0.308)	-0.031 (0.217)	0.180* (0.105)
Highest Education:						
Ma: Completed Prim.	0.136*** (0.029)	0.137*** (0.029)	0.268* (0.154)	0.035 (0.045)	-0.037 (0.033)	0.066*** (0.016)
Pa: Completed Prim.	0.307*** (0.104)	0.307*** (0.104)	2.524*** (0.687)	-0.431** (0.200)	-0.292** (0.140)	0.038 (0.071)
Pa: Completed Sec.	0.660*** (0.197)	0.661*** (0.197)	-0.810 (0.984)	0.854*** (0.289)	0.293 (0.212)	0.337*** (0.113)
Wealth:						
2nd Quintile	0.331*** (0.121)	0.332*** (0.121)	6.091*** (0.927)	-2.010*** (0.223)	-0.709*** (0.154)	-0.567*** (0.072)
3rd Quintile	0.534*** (0.163)	0.535*** (0.164)	2.848*** (1.057)	-3.402*** (0.275)	-1.482*** (0.189)	-0.699*** (0.091)
4th Quintile	0.988*** (0.197)	0.991*** (0.197)	3.360*** (1.163)	-4.191*** (0.283)	-1.805*** (0.191)	-0.767*** (0.090)
5th Quintile	1.119*** (0.252)	1.123*** (0.252)	11.645*** (1.204)	-4.297*** (0.314)	-2.054*** (0.218)	-0.460*** (0.110)
Rural Household	0.083 (0.170)	0.075 (0.173)	-0.100 (0.244)	-4.166*** (0.215)	-1.499*** (0.130)	-1.085*** (0.059)
Child Characteristics:						
Girl	-0.147 (0.102)	-0.148 (0.102)	0.301 (0.210)			
Nr. of Older Brothers	0.089 (0.084)	0.088 (0.085)	0.379** (0.189)			
Nr. of Older Sisters	0.176** (0.069)	0.176** (0.069)	-0.518* (0.288)			
Nr. of Younger Brothers	-0.138* (0.083)	-0.138* (0.083)	-0.387* (0.233)			
Nr. of Younger Sisters	-0.019 (0.082)	-0.018 (0.082)	1.073*** (0.261)			
Initial Conditions:						
Aged 6 in 2003	0.434*** (0.111)	0.434*** (0.111)	0.917*** (0.268)			
Aged 6 in 2004	0.380*** (0.118)	0.379*** (0.118)	1.401*** (0.516)			
Aged 6 in 2005	0.435** (0.213)	0.435** (0.213)	10.336*** (1.324)			
Shape of Hazard:						
Age Interval 6-7	-0.683*** (0.127)	-0.685*** (0.127)	1.528*** (0.248)			
Age Interval 7-8	-0.464** (0.192)	-0.467** (0.192)	2.775*** (0.362)			
Age Interval 8-9	-0.698*** (0.268)	-0.699*** (0.268)	3.162*** (0.456)			
Age Interval 9-10	-1.181** (0.489)	-1.183** (0.489)	2.805*** (0.629)			

Kerala	1) Model 1) School	2) Model 2) School	3) Model 3) School	4) Model 3) Economic Aut	5) Model 3) Dec-Making Aut	6) Model 3) Emotional Aut
Female Autonomy	-	0.122* (0.065)	-0.000 (0.011)	1.000 (0.000)	-4.828*** (1.509)	-0.265 (0.596)
Caste:						
Scheduled Caste	-1.045 (0.693)	-1.097 (0.694)	-0.595 (0.537)	1.000 (0.000)	1.000 (0.000)	1.000 (0.000)
Scheduled Tribe	-2.022** (0.997)	-2.082** (1.048)	-1.268 (0.840)	0.245 (0.298)	0.091 (0.323)	-0.472** (0.220)
Other Backward Caste	-0.210 (0.433)	-0.235 (0.442)	-0.220 (0.388)	0.003 (0.066)	-0.193* (0.100)	0.079 (0.063)
Religion:						
Muslim	0.142 (0.473)	0.232 (0.484)	0.643 (0.429)	0.080 (0.081)	0.491*** (0.104)	-0.510*** (0.076)
Highest Education:						
Ma: Completed Prim.	0.072 (0.120)	0.058 (0.124)	0.120 (0.104)	0.010 (0.023)	0.026 (0.030)	0.015 (0.018)
Pa: Completed Prim.	1.203** (0.468)	1.148** (0.476)	0.792** (0.402)	0.011 (0.076)	-0.408*** (0.118)	0.265*** (0.072)
Pa: Completed Sec.	2.008** (0.909)	1.697* (0.924)	1.124 (0.845)	-0.180 (0.168)	-0.271 (0.170)	0.470*** (0.111)
Wealth:						
2nd Quintile	1.124 (1.208)	1.152 (1.222)	1.567* (0.876)	1.310*** (0.163)	-0.133 (0.240)	0.046 (0.243)
3rd Quintile	1.760 (1.138)	1.818 (1.167)	2.105*** (0.780)	1.418*** (0.136)	0.392* (0.202)	0.152 (0.226)
4th Quintile	1.013 (1.047)	1.042 (1.056)	1.355** (0.665)	1.342*** (0.115)	-0.077 (0.192)	0.413* (0.221)
5th Quintile	0.881 (1.087)	0.867 (1.100)	1.058 (0.694)	1.213*** (0.130)	0.124 (0.184)	0.533** (0.226)
Rural Household	-0.431 (0.440)	-0.472 (0.445)	-0.115 (0.364)	0.015 (0.061)	0.022 (0.097)	0.100 (0.088)
Child Characteristics:						
Girl	0.360 (0.555)	0.387 (0.570)	0.357 (0.501)			
Nr. of Older Brothers	-0.524 (0.472)	-0.498 (0.480)	-0.199 (0.388)			
Nr. of Older Sisters	-0.236 (0.423)	-0.227 (0.434)	-0.014 (0.360)			
Nr. of Younger Brothers	-0.120 (0.473)	-0.114 (0.483)	-0.053 (0.415)			
Nr. of Younger Sisters	0.482 (0.605)	0.486 (0.606)	0.378 (0.544)			
Initial Conditions:						
Aged 6 in 2003	-0.154 (0.473)	-0.185 (0.488)	-0.011 (0.423)			
Aged 6 in 2004	0.337 (0.536)	0.372 (0.545)	0.553 (0.518)			
Aged 6 in 2005	0.822 (1.128)	0.776 (1.124)	0.719 (1.074)			
Shape of Hazard:						
Age Interval 6-7	-0.390 (0.841)	-0.246 (0.873)	-1.313** (0.546)			
Age Interval 7-8	-2.445* (1.481)	-2.110 (1.475)	-3.749*** (1.369)			
Age Interval 8-9	0.892 -0.699	1.183 (1.628)	0.204 (1.343)			

Notes: (i) Estimates are based on the sample of women with children aged 6-11 at the beginning of the academic year April 2005. (ii) Model (1): duration specification without female autonomy variable, results reported in column (1); Model (2): duration specification with female autonomy indices, results reported in column (2); Model (3): structural equation model specification, results reported in columns (3) to (6). (iii) Dependent Variable in columns 1), 2) and 3): Dummy whether child enters school; Dependent variable in column 4): economic autonomy, in column 5) decision-making autonomy and in column 6) emotional autonomy. (iv) Standard Errors reported in parentheses. (v) * p<0.1, ** p<0.05, *** p<0.01;

Table (10): Correlations between the Three Sub-Spheres of Female Autonomy for Andhra Pradesh, Bihar, Madhya Pradesh and Kerala, Coefficients (Standard Errors)

AP	Economic Autonomy	Decision-Making Autonomy	Emotional Autonomy
Economic Autonomy	1.000 (0.000)	0.395*** (0.043)	1.000 (0.000)
Decision-Making Autonomy		1.000 (0.000)	-0.087 (0.101)
Emotional Autonomy			1.000 (0.000)

Bihar	Economic Autonomy	Decision-Making Autonomy	Emotional Autonomy
Economic Autonomy	1.000 (0.000)	-0.610*** (0.025)	1.000 (0.000)
Decision-Making Autonomy		1.000 (0.000)	0.836*** (0.038)
Emotional Autonomy			1.000 (0.000)

Kerala	Economic Autonomy	Decision-Making Autonomy	Emotional Autonomy
Economic Autonomy	1.000 (0.000)	10.706 (29.743)	1.000 (0.000)
Decision-Making Autonomy		1.000 (0.000)	-0.265 (0.596)
Emotional Autonomy			1.000 (0.000)

MP	Economic Autonomy	Decision-Making Autonomy	Emotional Autonomy
Economic Autonomy	1.000 (0.000)	-0.895*** (0.049)	1.000 (0.000)
Decision-Making Autonomy		1.000 (0.000)	0.644*** (0.052)
Emotional Autonomy			1.000 (0.000)

Notes: (i) Estimates are based on the sample of women with children aged 6-11 at the beginning of the academic year April 2005. (ii) Estimates are derived from Structural Model specified in equation (8). (iii) Correlations between Economic and Emotional Autonomy have been set equation to one for identification. (iv) Standard Errors reported in parentheses; (v) * $p<0.1$, ** $p<0.05$, *** $p<0.01$

Appendices

Appendix 1:

1. Economic Autonomy:

- m1: takes the value of 1 if the woman decides either herself or jointly with her husband on what to do with her husband's money.
- m2: takes the value of 1 if the woman has money of her own that she alone can decide how to use.
- m3: takes the value of 1 if the woman has a bank or savings account that she can use herself.

2. Decision-making Autonomy:

- m4: takes the value of 1 if the woman decides either alone or jointly with her husband on her own health care.
- m5: takes the value of 1 if the woman decides either alone or jointly with her husband on small and large household purchases
- m6: takes the value of 1 if the woman is allowed to go alone or jointly with someone else to the market.
- m7: takes the value of 1 if the woman is allowed to go alone or jointly with someone else to places outside the community.

3. Emotional Autonomy:

- m8: takes the value of 1 if woman believes her husband is not justified in beating her if she argues with him.
- m9: takes the value of 1 if woman believes her husband is not justified in beating her if she is disrespectful.
- m10: takes the value of 1 if woman believes her husband is not justified in beating her if she goes out without telling him.
- m11: takes the value of 1 if woman believes her husband is not justified in beating her if he suspects her of being unfaithful.
- m12: takes the value of 1 if woman believes her husband is not justified in beating her if she neglects house or children.
- m13: takes the value of 1 if woman believes her husband is not justified in beating her if she refuses to have sex with him.
- m14: takes the value of 1 if woman believes her husband is not justified in beating her if she does not cook the food properly.
- m15: takes the value of 1 if the woman believes she is justified in refusing sex if husband has sexually transmitted disease.
- m16: takes the value of 1 if the woman believes she is justified in refusing sex if husband has other women.
- m17: takes the value of 1 if the woman believes she is justified in refusing sex if she is tired.

Appendix 2

The Response Model – linear predictor for mother j (equations (5) & (7))

$$
\nu = \begin{bmatrix} \nu_1 \\ \nu_{21} \\ \nu_{22} \\ \nu_{23} \\ \nu_{31} \\ \nu_{32} \\ \nu_{33} \\ \nu_{34} \\ \nu_{41} \\ \nu_{42} \\ \nu_{43} \\ \nu_{44} \\ \nu_{45} \\ \nu_{46} \\ \nu_{47} \\ \nu_{48} \\ \nu_{49} \\ \nu_{410} \end{bmatrix}
= \begin{bmatrix} X \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{bmatrix} \alpha
+ \begin{bmatrix} \lambda_F & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & \lambda_{22} & 0 & 0 \\ 0 & \lambda_{23} & 0 & 0 \\ 0 & 0 & 1 & 0 \\ 0 & 0 & \lambda_{32} & 0 \\ 0 & 0 & \lambda_{33} & 0 \\ 0 & 0 & \lambda_{34} & 0 \\ 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & \lambda_{42} \\ 0 & 0 & 0 & \lambda_{43} \\ 0 & 0 & 0 & \lambda_{44} \\ 0 & 0 & 0 & \lambda_{45} \\ 0 & 0 & 0 & \lambda_{46} \\ 0 & 0 & 0 & \lambda_{47} \\ 0 & 0 & 0 & \lambda_{48} \\ 0 & 0 & 0 & \lambda_{49} \\ 0 & 0 & 0 & \lambda_{410} \end{bmatrix}
\begin{bmatrix} \eta_F^{(3)} \\ \eta_2^{(3)} \\ \eta_3^{(3)} \\ \eta_4^{(3)} \end{bmatrix}
+ \begin{bmatrix} q \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{bmatrix}
$$

Notes: In the above, (i) the size of column vector ν_1 will vary according to the binary coded duration variable for each child and the number of children who are aged 6 to 11; (ii) **q** vector contains the sum of the τ_k that picks up the shape of the hazard and the child specific unobservable $\eta_C^{(2)}$.

The Structural Model linking the unobservables for each mother (equation (8))

$$
\begin{bmatrix} \eta_{Cj}^{(2)} \\ \eta_{Fj}^{(3)} \\ \eta_{2j}^{(3)} \\ \eta_{3j}^{(3)} \\ \eta_{4j}^{(3)} \end{bmatrix}
= \begin{bmatrix} 0 & 0 & 0. & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 \\ 0 & \beta_2 & \beta_4 & 0 & 0 \\ 0 & \beta_3 & 1 & \beta_6 & 0 \end{bmatrix}
\begin{bmatrix} \eta_{Cj}^{(2)} \\ \eta_{Fj}^{(3)} \\ \eta_{2j}^{(3)} \\ \eta_{3j}^{(3)} \\ \eta_{4j}^{(3)} \end{bmatrix}
+ \begin{bmatrix} 0 \\ 0 \\ \theta_1' \\ \theta_2' \\ \theta_3' \end{bmatrix} z
+ \begin{bmatrix} 0 \\ 0 \\ \xi_1 \\ \xi_2 \\ \xi_3 \end{bmatrix}
$$

Appendix 3: Estimates for Models (1), (2) and (3), Coefficients (Standard Errors)

All India	1) Model 1)	2) Model 2)	3) Model 3)	4) Model 3)	5) Model 3) Dec-Making Aut	6) Model 3)
	School	School	School	Economic Aut	Aut	Emotional Aut
Female Autonomy	-	0.020***	0.725***	1.000	0.745***	-0.387***
		(0.004)	(0.166)	(0.000)	(0.026)	(0.069)
Caste:						
Scheduled Caste	-0.111***	-0.110***	-0.199***	1.000	1.000	1.000
	(0.041)	(0.041)	(0.060)	(0.000)	(0.000)	(0.000)
Scheduled Tribe	-0.531***	-0.531***	-0.672***	-1.009***	1.392***	-0.301*
	(0.047)	(0.047)	(0.065)	(0.223)	(0.038)	(0.159)
Other Backward Caste	-0.157***	-0.153***	-0.201***	-0.930***	-0.198	0.136**
	(0.036)	(0.036)	(0.039)	(0.112)	(0.230)	(0.061)
Religion:						
Muslim	-0.607***	-0.605***	-0.811***	-0.099	-0.084***	0.373***
	(0.041)	(0.041)	(0.042)	(0.182)	(0.008)	(0.097)
Highest Education:						
Ma: Completed Prim.	0.142***	0.138***	0.203***	0.045***	2.075***	0.107***
	(0.008)	(0.008)	(0.011)	(0.008)	(0.203)	(0.023)
Pa: Completed Prim.	0.416***	0.414***	0.512***	0.214	-0.154***	0.074
	(0.029)	(0.029)	(0.023)	(0.148)	(0.039)	(0.065)
Pa: Completed Sec.	0.732***	0.722***	0.984***	0.013	0.058	0.163
	(0.055)	(0.055)	0.058	(0.011)	(0.138)	(0.149)
Wealth:				0.110**	0.065	1.586***
2nd Quintile	0.413***	0.407***	0.555***	(0.049)	(0.068)	(0.148)
	(0.036)	(0.036)	(0.060)	0.036	0.028	1.233***
3rd Quintile	0.746***	0.738***	0.891***	(0.144)	(0.060)	(0.271)
	(0.041)	(0.041)	(0.061)	0.028	0.158***	0.769***
4th Quintile	1.151***	1.134***	1.201***	(0.060)	(0.042)	(0.196)
	(0.049)	(0.049)	(0.042)	0.393***	0.902***	1.123***
5th Quintile	1.487***	1.458***	1.682***	(0.078)	(0.123)	(0.255)
	(0.063)	(0.063)	(0.060)	1.342***	0.400***	0.556**
Rural Household	0.134***	0.145***	0.109***	(0.115)	(0.060)	(0.166)
	(0.042)	(0.042)	(0.039)			
Child Characteristics:						
Girl	-0.054*	-0.053*	-0.061*			
	(0.030)	(0.030)	(0.030)			
Nr. of Older Brothers	-0.050**	-0.049**	-0.080**			
	(0.023)	(0.023)	(0.038)			
Nr. of Older Sisters	-0.025	-0.025	-0.034			
	(0.020)	(0.020)	(0.060)			
Nr. of Younger Brothers	-0.067***	-0.066***	-0.098***			
	(0.024)	(0.024)	(0.011)			
Nr. of Younger Sisters	-0.079***	-0.078***	-0.101***			
	(0.024)	(0.024)	(0.060)			
Initial Conditions:						
Aged 6 in 2003	0.293***	0.292***	0.308***			
	(0.031)	(0.031)	(0.049)			
Aged 6 in 2004	0.474***	0.476***	0.528***			
	(0.035)	(0.035)	(0.042)			
Aged 6 in 2005	-0.098*	-0.098*	-0.090*			
	(0.058)	(0.058)	(0.060)			
Shape of Hazard:						
Age Interval 6-7	-0.421***	-0.422***	-0.501***			
	(0.038)	(0.038)	(0.078)			
Age Interval 7-8	-0.025	-0.026	-0.045			
	(0.057)	(0.057)	(0.060)			
Age Interval 8-9	-0.333***	-0.334***	-0.487***			
	(0.078)	(0.078)	(0.065)			
Age Interval 9-10	-0.907***	-0.912***	-1.103***			
	(0.132)	(0.132)	(0.115)			
Age Interval 10-11	-0.828**	-0.836**	-0.935***			
	(0.422)	(0.423)	(0.271)			

Gujarat	1) Model 1) School	2) Model 2) School	3) Model 3) School	4) Model 3) Economic Aut	5) Model 3) Dec-Making Aut	6) Model 3) Emotional Aut
Female Autonomy	-	0.015	-0.114	1.000	-3.642	-2.990
		(0.024)	(0.091)	(0.000)	(3.098)	(2.006)
Caste:						
Scheduled Caste	-0.434	-0.430	0.004	1.000	1.000	1.000
	(0.308)	(0.309)	(0.197)	(0.000)	(0.000)	(0.000)
Scheduled Tribe	-0.668*	-0.644	-0.668*	0.129	0.738***	-0.190**
	(0.391)	(0.399)	(0.404)	(0.191)	(0.115)	(0.091)
Other Backward Caste	-0.712***	-0.695***	-0.694***	0.143	0.506***	0.172***
	(0.259)	(0.262)	(0.261)	(0.117)	(0.073)	(0.061)
Religion:						
Muslim	-0.769**	-0.783**	-0.583**	-0.131	0.205*	0.373***
	(0.316)	(0.319)	(0.262)	(0.182)	(0.123)	(0.097)
Highest Education:						
Ma: Completed Prim.	0.330***	0.326***	0.406**	-0.047	0.037*	0.069***
	(0.069)	(0.070)	(0.179)	(0.031)	(0.021)	(0.016)
Pa: Completed Prim.	0.185	0.181	0.182	-0.122	0.038	0.147**
	(0.199)	(0.200)	(0.200)	(0.117)	(0.081)	(0.064)
Pa: Completed Sec.	1.125**	1.125**	1.139**	0.124	0.058	0.228**
	(0.567)	(0.568)	(0.568)	(0.201)	(0.138)	(0.103)
Wealth:						
2nd Quintile	0.954***	0.940***	0.951***	-1.984***	0.404***	-0.577***
	(0.253)	(0.256)	(0.256)	(0.156)	(0.102)	(0.090)
3rd Quintile	1.746***	1.747***	1.766***	-1.770***	0.370***	-0.802***
	(0.291)	(0.294)	(0.297)	(0.147)	(0.095)	(0.082)
4th Quintile	2.011***	2.003***	2.009***	-1.814***	0.521***	-0.810***
	(0.330)	(0.333)	(0.333)	(0.155)	(0.101)	(0.091)
5th Quintile	2.394***	2.382***	2.377***	-1.954***	0.902***	-0.353***
	(0.443)	(0.446)	(0.447)	(0.222)	(0.123)	(0.090)
Rural Household	0.931***	0.937***	0.948***	-0.699***	0.410***	0.025
	(0.235)	(0.237)	(0.238)	(0.102)	(0.070)	(0.064)
Child Characteristics:						
Girl	-0.178	-0.179	-0.190			
	(0.207)	(0.208)	(0.208)			
Nr. of Older Brothers	-0.028	-0.025	-0.034			
	(0.167)	(0.168)	(0.168)			
Nr. of Older Sisters	0.204	0.206	0.219*			
	(0.131)	(0.132)	(0.133)			
Nr. of Younger Brothers	-0.051	-0.042	-0.044			
	(0.176)	(0.177)	(0.177)			
Nr. of Younger Sisters	0.036	0.050	0.047			
	(0.165)	(0.168)	(0.167)			
Initial Conditions:						
Aged 6 in 2003	0.256	0.264	0.270			
	(0.205)	(0.207)	(0.207)			
Aged 6 in 2004	0.809***	0.811***	0.822***			
	(0.242)	(0.243)	(0.244)			
Aged 6 in 2005	-0.224	-0.227	-0.230			
	(0.352)	(0.353)	(0.353)			
Shape of Hazard:						
Age Interval 6-7	-1.108***	-1.095***	-1.671***			
	(0.251)	(0.253)	(0.182)			
Age Interval 7-8	-0.589	-0.573	-1.510***			
	(0.371)	(0.373)	(0.262)			
Age Interval 8-9	-2.538***	-2.518***	-3.634***			
	(0.718)	(0.718)	(0.640)			
Age Interval 9-10	-2.033**	-2.022**	-3.215***			
	(0.909)	(0.909)	(0.830)			
Age Interval 10-11						

Haryana	1) Model 1) School	2) Model 2) School	3) Model 3) School	4) Model 3) Economic Aut	5) Model 3) Dec-Making Aut	6) Model 3) Emotional Aut
Female Autonomy	-	0.060***	1.283***	1.000	1.191***	-0.936***
		(0.023)	(0.230)	(0.000)	(0.186)	(0.118)
Caste:						
Scheduled Caste	-0.231	-0.187	-1.335***	1.000	1.000	1.000
	(0.204)	(0.202)	(0.349)	(0.000)	(0.000)	(0.000)
Scheduled Tribe	-1.429*	-1.214*	-1.351	-3.183***	0.837	0.118
	(0.770)	(0.714)	(2.750)	(1.098)	(0.699)	(0.384)
Other Backward Caste	-0.115	-0.074	-0.482	-0.937***	1.056***	-0.140
	(0.186)	(0.189)	(0.390)	(0.239)	(0.221)	(0.085)
Religion:						
Muslim	-1.892***	-1.870***	-1.556**			
	(0.343)	(0.324)	(0.643)	-0.085	-0.240**	-0.934***
Highest Education:				(0.076)	(0.100)	(0.306)
Ma: Completed Prim.	0.140***	0.129**	0.150	0.120**	0.182***	0.046***
	(0.052)	(0.052)	(0.093)	(0.059)	(0.046)	(0.014)
Pa: Completed Prim.	0.639***	0.690***	0.946**	0.019	-0.025	-0.447**
	(0.183)	(0.182)	(0.390)	(0.050)	(0.066)	(0.203)
Pa: Completed Sec.	0.558	0.591	0.643	-0.006	-0.113	-0.049
	(0.418)	(0.419)	(0.703)	(0.089)	(0.118)	(0.360)
Wealth:						
2nd Quintile	0.390	0.410	3.106***	0.198**	-0.068	-0.295
	(0.266)	(0.266)	(0.930)	(0.095)	(0.125)	(0.382)
3rd Quintile	0.508*	0.543**	2.940***	0.289***	0.010	-0.372
	(0.267)	(0.266)	(0.857)	(0.091)	(0.120)	(0.368)
4th Quintile	0.780***	0.760**	3.857***	0.215**	-0.095	0.387
	(0.299)	(0.297)	(1.080)	(0.097)	(0.129)	(0.394)
5th Quintile	1.820***	1.742***	3.949***	0.531***	0.036	0.802*
	(0.421)	(0.416)	(1.041)	(0.109)	(0.144)	(0.442)
Rural Household	0.584*	0.521*	2.602***	-0.135**	-0.092	0.005
	(0.322)	(0.298)	(0.679)	(0.057)	(0.076)	(0.232)
Child Characteristics:						
Girl	-0.434**	-0.426**	-0.380			
	(0.185)	(0.186)	(0.248)			
Nr. of Older Brothers	0.009	0.028	0.283			
	(0.153)	(0.155)	(0.211)			
Nr. of Older Sisters	-0.091	-0.080	-0.204			
	(0.116)	(0.115)	(0.175)			
Nr. of Younger Brothers	0.041	0.054	0.019			
	(0.166)	(0.165)	(0.235)			
Nr. of Younger Sisters	-0.207	-0.185	-0.227			
	(0.158)	(0.159)	(0.230)			
Initial Conditions:						
Aged 6 in 2003	0.112	0.127	0.107			
	(0.194)	(0.195)	(0.256)			
Aged 6 in 2004	0.203	0.213	0.229			
	(0.212)	(0.212)	(0.268)			
Aged 6 in 2005	-0.565	-0.589	-0.569			
	(0.425)	(0.426)	(0.526)			
Shape of Hazard:						
Age Interval 6-7	-0.975***	-0.949***	-0.207			
	(0.270)	(0.253)	(0.323)			
Age Interval 7-8	-0.917**	-0.889**	0.113			
	(0.406)	(0.378)	(0.420)			
Age Interval 8-9	-0.971*	-0.974**	0.197			
	(0.518)	(0.489)	(0.499)			
Age Interval 9-10	-1.771**	-1.802**				
	(0.872)	(0.853)				
Age Interval 10-11						

Karnataka	1) Model 1) School	2) Model 2) School	3) Model 3) School	4) Model 3) Economic Aut	5) Model 3) Dec-Making Aut	6) Model 3) Emotional Aut
Female Autonomy	-	0.005	0.101	1.000	0.756***	-0.247***
		(0.019)	(0.182)	(0.000)	(0.182)	(0.073)
Caste:						
Scheduled Caste	-0.170	-0.168	-0.168	1.000	1.000	1.000
	(0.228)	(0.228)	(0.228)	(0.000)	(0.000)	(0.000)
Scheduled Tribe	-0.427	-0.426	-0.431	0.037	0.074	-0.377
	(0.260)	(0.263)	(0.265)	(0.082)	(0.093)	(0.244)
Other Backward Caste	0.085	0.086	0.087	-0.074	-0.126**	-0.149
	(0.194)	(0.194)	(0.194)	(0.052)	(0.058)	(0.153)
Religion:						
Muslim	-0.744***	-0.745***	-0.739***	-0.034	-0.084	0.038
	(0.188)	(0.188)	(0.188)	(0.059)	(0.066)	(0.174)
Highest Education:						
Ma: Completed Prim.	0.230***	0.229***	0.230***	0.027**	0.035***	0.054*
	(0.044)	(0.044)	(0.044)	(0.011)	(0.012)	(0.032)
Pa: Completed Prim.	0.387***	0.382***	0.383***	0.165***	0.140***	0.322**
	(0.142)	(0.144)	(0.143)	(0.045)	(0.051)	(0.135)
Pa: Completed Sec.	0.186	0.180	0.176	0.305***	0.102	0.338
	(0.285)	(0.286)	(0.285)	(0.072)	(0.081)	(0.215)
Wealth:						
2nd Quintile	0.510***	0.511***	0.510***	-0.072	-0.118*	-0.162
	(0.159)	(0.160)	(0.160)	(0.063)	(0.071)	(0.187)
3rd Quintile	0.852***	0.853***	0.856***	-0.034	-0.252***	0.312
	(0.181)	(0.182)	(0.182)	(0.065)	(0.073)	(0.193)
4th Quintile	1.038***	1.042***	1.044***	-0.003	-0.129	0.098
	(0.241)	(0.242)	(0.242)	(0.075)	(0.085)	(0.223)
5th Quintile	1.585***	1.579***	1.576***	0.336***	0.173*	1.233***
	(0.343)	(0.343)	(0.343)	(0.092)	(0.103)	(0.271)
Rural Household	0.422**	0.425**	0.420**	-0.028	-0.138**	-0.748***
	(0.189)	(0.190)	(0.190)	(0.049)	(0.056)	(0.147)
Child Characteristics:						
Girl	-0.038	-0.035	-0.038			
	(0.153)	(0.154)	(0.153)			
Nr. of Older Brothers	-0.224**	-0.222*	-0.222*			
	(0.114)	(0.114)	(0.114)			
Nr. of Older Sisters	-0.013	-0.013	-0.016			
	(0.104)	(0.104)	(0.104)			
Nr. of Younger Brothers	-0.075	-0.075	-0.074			
	(0.122)	(0.122)	(0.122)			
Nr. of Younger Sisters	-0.001	-0.003	-0.002			
	(0.126)	(0.126)	(0.126)			
Initial Conditions:						
Aged 6 in 2003	0.152	0.153	0.153			
	(0.153)	(0.153)	(0.153)			
Aged 6 in 2004	0.371**	0.373**	0.371**			
	(0.170)	(0.170)	(0.170)			
Aged 6 in 2005	0.032	0.034	0.038			
	(0.284)	(0.284)	(0.284)			
Shape of Hazard:						
Age Interval 6-7	-0.995***	-0.995***	-0.995***			
	(0.155)	(0.155)	(0.155)			
Age Interval 7-8	-2.104***	-2.105***	-2.107***			
	(0.270)	(0.270)	(0.270)			
Age Interval 8-9	-2.349***	-2.349***	-2.352***			
	(0.391)	(0.391)	(0.391)			
Age Interval 9-10	-2.742***	-2.743***	-2.741***			
	(0.631)	(0.631)	(0.631)			
Age Interval 10-11	-1.508	-1.505	-1.515			
	(1.172)	(1.172)	(1.174)			

Maharashtra	1) Model 1) School	2) Model 2) School	3) Model 3) School	4) Model 3) Economic Aut	5) Model 3) Dec-Making Aut	6) Model 3) Emotional Aut
Female Autonomy	-	0.031* (0.017)	1.021*** (0.223)	1.000 (0.000)	1.058*** (0.223)	-0.522*** (0.195)
Caste:						
Scheduled Caste	0.140 (0.163)	0.139 (0.162)	0.152 (0.163)	1.000 (0.000)	1.000 (0.000)	1.000 (0.000)
Scheduled Tribe	-0.044 (0.188)	-0.061 (0.184)	-0.044 (0.187)	0.087 (0.057)	-0.050 (0.060)	-0.301* (0.159)
Other Backward Caste	0.059 (0.141)	0.063 (0.139)	0.068 (0.140)	-0.016 (0.038)	-0.076* (0.039)	-0.207** (0.104)
Religion:						
Muslim	-0.379** (0.167)	-0.358** (0.165)	-0.358** (0.167)	-0.203*** (0.045)	-0.173*** (0.046)	-0.221* (0.123)
Highest Education:						
Ma: Completed Prim.	0.179*** (0.031)	0.171*** (0.031)	0.175*** (0.031)	0.045*** (0.008)	0.019** (0.008)	0.107*** (0.023)
Pa: Completed Prim.	0.191 (0.119)	0.191 (0.118)	0.186 (0.119)	0.064* (0.038)	-0.154*** (0.039)	-0.099 (0.105)
Pa: Completed Sec.	0.383* (0.223)	0.361 (0.222)	0.368* (0.223)	0.266*** (0.054)	-0.011 (0.056)	0.163 (0.149)
Wealth:						
2nd Quintile	0.433** (0.177)	0.418** (0.173)	0.422** (0.175)	0.200*** (0.066)	0.077 (0.069)	0.105 (0.182)
3rd Quintile	0.845*** (0.199)	0.823*** (0.195)	0.844*** (0.198)	0.308*** (0.067)	0.096 (0.070)	0.409** (0.186)
4th Quintile	1.386*** (0.229)	1.334*** (0.225)	1.376*** (0.228)	0.405*** (0.070)	0.251*** (0.072)	0.945*** (0.192)
5th Quintile	1.613*** (0.265)	1.536*** (0.263)	1.605*** (0.264)	0.602*** (0.076)	0.275*** (0.079)	1.786*** (0.210)
Rural Household	0.062 (0.158)	0.099 (0.158)	0.073 (0.158)	-0.095** (0.041)	-0.361*** (0.042)	-0.329*** (0.112)
Child Characteristics:						
Girl	0.295** (0.134)	0.285** (0.132)	0.292** (0.134)			
Nr. of Older Brothers	-0.217* (0.112)	-0.227** (0.111)	-0.222** (0.112)			
Nr. of Older Sisters	-0.227*** (0.087)	-0.219** (0.086)	-0.222** (0.087)			
Nr. of Younger Brothers	-0.022 (0.110)	-0.021 (0.108)	-0.023 (0.109)			
Nr. of Younger Sisters	0.013 (0.106)	0.025 (0.105)	0.014 (0.106)			
Initial Conditions:						
Aged 6 in 2003	0.165 (0.134)	0.167 (0.132)	0.163 (0.134)			
Aged 6 in 2004	0.544*** (0.154)	0.536*** (0.152)	0.543*** (0.154)			
Aged 6 in 2005	-0.178 (0.242)	-0.174 (0.240)	-0.186 (0.241)			
Shape of Hazard:						
Age Interval 6-7	-0.686*** (0.217)	-0.725*** (0.207)	-0.702*** (0.217)			
Age Interval 7-8	-0.569* (0.330)	-0.620* (0.321)	-0.591* (0.332)			
Age Interval 8-9	-1.269*** (0.458)	-1.314*** (0.451)	-1.284*** (0.460)			
Age Interval 9-10	-3.119*** (1.119)	-3.180*** (1.120)	-3.118*** (1.121)			
Age Interval 10-11						

Orissa	1) Model 1)	2) Model 2)	3) Model 3)	4) Model 3)	5) Model 3)	6) Model 3)
				Economic	Dec-Making	Emotional
	School	School	School	Aut	Aut	Aut
Female Autonomy	-	0.037	-1.427***	1.000	1.425***	-1.021***
		(0.026)	(0.200)	(0.000)	(0.098)	(0.082)
Caste:						
Scheduled Caste	0.239	0.208	1.847***	1.000	1.000	1.000
	(0.284)	(0.277)	(0.362)	(0.000)	(0.000)	(0.000)
Scheduled Tribe	-1.422***	-1.370***	-1.340***	0.140	1.173***	0.079
	(0.345)	(0.326)	(0.316)	(0.146)	(0.119)	(0.074)
Other Backward Caste	0.058	0.066	0.063	-0.178	0.514***	0.350***
	(0.289)	(0.281)	(0.279)	(0.139)	(0.126)	(0.070)
Religion:						
Muslim	-0.894	-1.002	-0.140	-0.152	0.491	0.733***
	(0.724)	(0.725)	(1.290)	(0.666)	(0.544)	(0.176)
Highest Education:						
Ma: Completed Prim.	0.185***	0.174***	1.859***	0.149***	0.101***	-0.020
	(0.059)	(0.059)	(0.396)	(0.047)	(0.035)	(0.016)
Pa: Completed Prim.	1.329***	1.330***	1.335***	-0.710***	-0.313***	0.103
	(0.256)	(0.248)	(0.247)	(0.139)	(0.121)	(0.068)
Pa: Completed Sec.	2.130***	2.160***	2.147***	-0.906***	-0.683***	0.351***
	(0.742)	(0.737)	(0.733)	(0.287)	(0.241)	(0.123)
Wealth:						
2nd Quintile	0.964***	0.961***	0.943***	-0.639***	0.240**	-0.157**
	(0.234)	(0.227)	(0.224)	(0.137)	(0.121)	(0.072)
3rd Quintile	1.523***	1.467***	1.511***	-0.128	0.393**	-0.154**
	(0.296)	(0.291)	(0.290)	(0.203)	(0.163)	(0.069)
4th Quintile	4.111***	4.066***	4.064***	-0.418*	0.467**	-0.081
	(1.087)	(1.082)	(1.080)	(0.245)	(0.191)	(0.096)
5th Quintile	0.542	0.410	0.479	0.017	0.766***	0.971***
	(0.557)	(0.556)	(0.547)	(0.294)	(0.243)	(0.127)
Rural Household	-0.366	-0.293	-0.207	-0.475***	0.613***	-0.720***
	(0.276)	(0.281)	(0.280)	(0.115)	(0.093)	(0.046)
Child Characteristics:						
Girl	0.188	0.177	0.177			
	(0.230)	(0.225)	(0.224)			
Nr. of Older Brothers	-0.342*	-0.338*	-0.311*			
	(0.193)	(0.183)	(0.181)			
Nr. of Older Sisters	-0.154	-0.136	-0.149			
	(0.159)	(0.155)	(0.154)			
Nr. of Younger Brothers	0.237	0.266	0.220			
	(0.218)	(0.213)	(0.211)			
Nr. of Younger Sisters	-0.742***	-0.726***	-0.677***			
	(0.191)	(0.187)	(0.185)			
Initial Conditions:						
Aged 6 in 2003	0.494**	0.518**	0.537**			
	(0.234)	(0.227)	(0.221)			
Aged 6 in 2004	1.208***	1.192***	1.157***			
	(0.263)	(0.258)	(0.257)			
Aged 6 in 2005	0.342	0.388	0.403			
	(0.382)	(0.377)	(0.374)			
Shape of Hazard:						
Age Interval 6-7	-0.320	-0.359	-0.247			
	(0.243)	(0.241)	(0.267)			
Age Interval 7-8	0.002	-0.056	0.078			
	(0.329)	(0.330)	(0.380)			
Age Interval 8-9	-0.218	-0.279	-0.020			
	(0.429)	(0.430)	(0.489)			
Age Interval 9-10						
Age Interval 10-11						

Punjab	1) Model 1) School	2) Model 2) School	3) Model 3) School	4) Model 3) Economic Aut	5) Model 3) Dec-Making Aut	6) Model 3) Emotional Aut
Female Autonomy	-	0.038**	0.660***	1.000	-0.575***	-0.133***
		(0.018)	(0.090)	(0.000)	(0.109)	(0.050)
Caste:						
Scheduled Caste	0.058	0.041	-0.116	1.000	1.000	1.000
	(0.135)	(0.135)	(0.121)	(0.000)	(0.000)	(0.000)
Scheduled Tribe	0.111	0.155	-0.089	1.006	0.247	-0.633
	(1.149)	(1.148)	(1.032)	(1.891)	(0.969)	(0.754)
Other Backward Caste	-0.443**	-0.455**	-0.608***	-0.591***	-0.196	-0.335**
	(0.202)	(0.202)	(0.184)	(0.221)	(0.135)	(0.133)
Religion:						
Muslim	-0.348	-0.376	-0.430	-0.628*	-0.144	-0.400*
	(0.351)	(0.353)	(0.325)	(0.381)	(0.235)	(0.208)
Highest Education:						
Ma: Completed Prim.	0.099***	0.094***	0.093***	0.065**	-0.017	0.044**
	(0.032)	(0.032)	(0.031)	(0.033)	(0.021)	(0.019)
Pa: Completed Prim.	0.253*	0.250*	0.248*	0.214	0.062	-0.132
	(0.138)	(0.138)	(0.130)	(0.148)	(0.095)	(0.096)
Pa: Completed Sec.	0.856***	0.818***	0.737**	0.901***	0.177	0.212
	(0.316)	(0.316)	(0.306)	(0.253)	(0.179)	(0.155)
Wealth:						
2nd Quintile	0.903***	0.812**	-0.567***	-0.981***	2.075***	1.586***
	(0.343)	(0.347)	(0.217)	(0.349)	(0.203)	(0.148)
3rd Quintile	1.220***	1.150***	-0.341*	-0.481	1.882***	1.486***
	(0.337)	(0.338)	(0.190)	(0.307)	(0.165)	(0.123)
4th Quintile	1.782***	1.689***	0.126	-0.393	2.036***	1.755***
	(0.341)	(0.345)	(0.183)	(0.329)	(0.180)	(0.126)
5th Quintile	2.057***	1.933***	0.336	0.145	2.183***	1.812***
	(0.368)	(0.373)	(0.208)	(0.353)	(0.193)	(0.151)
Rural Household	0.498***	0.526***	0.295**	0.078	0.100	-0.016
	(0.160)	(0.161)	(0.125)	(0.142)	(0.096)	(0.086)
Child Characteristics:						
Girl	0.328**	0.325**	0.161			
	(0.147)	(0.147)	(0.139)			
Nr. of Older Brothers	0.102	0.097	-0.061			
	(0.122)	(0.122)	(0.111)			
Nr. of Older Sisters	-0.031	-0.033	-0.122			
	(0.115)	(0.115)	(0.105)			
Nr. of Younger Brothers	-0.006	-0.002	-0.139			
	(0.129)	(0.129)	(0.120)			
Nr. of Younger Sisters	-0.331***	-0.328***	-0.339***			
	(0.122)	(0.122)	(0.115)			
Initial Conditions:						
Aged 6 in 2003	0.074	0.068	-0.032			
	(0.147)	(0.147)	(0.141)			
Aged 6 in 2004	0.330*	0.335*	0.171			
	(0.172)	(0.172)	(0.164)			
Aged 6 in 2005	-0.287	-0.294	-0.320			
	(0.311)	(0.312)	(0.298)			
Shape of Hazard:						
Age Interval 6-7	-0.338**	-0.334**	-0.579***			
	(0.146)	(0.146)	(0.137)			
Age Interval 7-8	-0.322	-0.320	-0.745***			
	(0.231)	(0.230)	(0.214)			
Age Interval 8-9	-1.300***	-1.307***	-1.759***			
	(0.423)	(0.424)	(0.402)			
Age Interval 9-10	-1.745**	-1.780**	-2.406***			
	(0.788)	(0.789)	(0.766)			
Age Interval 10-11						

Rajastan	1) Model 1) School	2) Model 2) School	3) Model 3) School	4) Model 3) Economic Aut	5) Model 3) Dec-Making Aut	6) Model 3) Emotional Aut
Female Autonomy	-	-0.010	2.365***	1.000	0.155***	-0.229***
		(0.017)	(0.224)	(0.000)	(0.018)	(0.061)
Caste:						
Scheduled Caste	-0.814***	-0.819***	-2.719***	1.000	1.000	1.000
	(0.195)	(0.196)	(0.381)	(0.000)	(0.000)	(0.000)
Scheduled Tribe	-0.421*	-0.420*	-4.360***	-1.022***	1.392***	0.029
	(0.216)	(0.216)	(1.217)	(0.180)	(0.038)	(0.142)
Other Backward Caste	-0.353**	-0.360**	-2.143***	-0.930***	1.342***	0.043
	(0.164)	(0.165)	(0.781)	(0.112)	(0.026)	(0.093)
Religion:						
Muslim	-1.486***	-1.491***	-7.243***	-0.164***	-0.171***	-0.533***
	(0.194)	(0.194)	(1.264)	(0.055)	(0.064)	(0.180)
Highest Education:						
Ma: Completed Prim.	0.040	0.042	0.071	0.629***	0.190***	0.166***
	(0.044)	(0.044)	(0.255)	(0.063)	(0.014)	(0.017)
Pa: Completed Prim.	0.509***	0.512***	2.073**	-0.132***	-0.026	0.395***
	(0.124)	(0.124)	(0.833)	(0.040)	(0.047)	(0.131)
Pa: Completed Sec.	1.372***	1.381***	3.736**	0.005	0.145*	0.396*
	(0.306)	(0.307)	(1.546)	(0.072)	(0.084)	(0.236)
Wealth:						
2nd Quintile	0.758***	0.763***	-0.636	0.110**	0.052	0.324**
	(0.151)	(0.151)	(0.993)	(0.049)	(0.058)	(0.162)
3rd Quintile	0.662***	0.665***	-1.993*	0.160***	0.028	0.446***
	(0.160)	(0.160)	(1.026)	(0.051)	(0.060)	(0.166)
4th Quintile	1.232***	1.241***	-0.189	0.313***	0.031	0.769***
	(0.210)	(0.211)	(1.097)	(0.060)	(0.070)	(0.196)
5th Quintile	2.175***	2.191***	-1.062	0.393***	0.011	1.123***
	(0.303)	(0.304)	(1.400)	(0.078)	(0.091)	(0.255)
Rural Household	0.687***	0.678***	-9.723***	-0.170***	-0.400***	-0.400**
	(0.192)	(0.193)	(1.545)	(0.051)	(0.060)	(0.166)
Child Characteristics:						
Girl	-0.518***	-0.519***	-1.442***			
	(0.122)	(0.122)	(0.276)			
Nr. of Older Brothers	0.011	0.011	-0.175			
	(0.095)	(0.095)	(0.226)			
Nr. of Older Sisters	-0.055	-0.055	-0.197			
	(0.076)	(0.076)	(0.174)			
Nr. of Younger Brothers	0.221**	0.220**	0.418			
	(0.103)	(0.103)	(0.297)			
Nr. of Younger Sisters	-0.112	-0.112	0.067			
	(0.093)	(0.093)	(0.237)			
Initial Conditions:						
Aged 6 in 2003	0.451***	0.451***	1.113***			
	(0.129)	(0.129)	(0.284)			
Aged 6 in 2004	0.648***	0.652***	1.567***			
	(0.148)	(0.148)	(0.315)			
Aged 6 in 2005	-0.160	-0.156	-0.403			
	(0.275)	(0.275)	(0.601)			
Shape of Hazard:						
Age Interval 6-7	-0.475***	-0.472***	1.439***			
	(0.157)	(0.156)	(0.267)			
Age Interval 7-8	-0.077	-0.073	2.867***			
	(0.237)	(0.235)	(0.401)			
Age Interval 8-9	-0.752**	-0.752**	2.690***			
	(0.326)	(0.324)	(0.490)			
Age Interval 9-10	-1.324**	-1.316**	2.249***			
	(0.561)	(0.559)	(0.719)			
Age Interval 10-11						

Tamil Nadu	1) Model 1) School	2) Model 2) School	3) Model 3) School	4) Model 3) Economic Aut	5) Model 3) Dec-Making Aut	6) Model 3) Emotional Aut
Female Autonomy	-	-0.009	-2.447***	1.000	1.225***	-1.520***
		(0.051)	(0.412)	(0.000)	(0.114)	(0.105)
Caste:						
Scheduled Caste	2.119**	2.101**	2.992***	1.000	1.000	1.000
	(0.899)	(0.904)	(0.758)	(0.000)	(0.000)	(0.000)
Scheduled Tribe	1.103	1.061	1.356	0.572	1.076***	0.376
	(1.521)	(1.541)	(1.464)	(0.371)	(0.259)	(0.242)
Other Backward Caste	2.488***	2.471***	2.505***	-0.129	0.726***	0.974***
	(0.873)	(0.877)	(0.878)	(0.142)	(0.077)	(0.058)
Religion:						
Muslim	0.123	0.122	-1.115	-0.245	-0.257**	0.143
	(0.708)	(0.707)	(1.065)	(0.335)	(0.126)	(0.110)
Highest Education:						
Ma: Completed Prim.	0.221***	0.221***	2.263***	0.019	0.031**	0.013
	(0.075)	(0.075)	(0.516)	(0.035)	(0.015)	(0.011)
Pa: Completed Prim.	0.729**	0.729**	0.754**	-0.326***	-0.016	0.234***
	(0.302)	(0.302)	(0.305)	(0.122)	(0.074)	(0.053)
Pa: Completed Sec.	1.647*	1.661*	1.631*	-0.260	-0.144	0.347***
	(0.854)	(0.858)	(0.852)	(0.221)	(0.124)	(0.087)
Wealth:						
2nd Quintile	0.041	0.037	0.022	-0.675***	0.592***	0.397***
	(0.423)	(0.424)	(0.419)	(0.181)	(0.113)	(0.077)
3rd Quintile	1.033**	1.032**	1.039**	-0.455**	0.667***	0.313***
	(0.436)	(0.436)	(0.435)	(0.203)	(0.108)	(0.072)
4th Quintile	0.914*	0.918*	0.896*	-0.510**	0.570***	0.379***
	(0.507)	(0.508)	(0.508)	(0.210)	(0.119)	(0.074)
5th Quintile	0.429	0.434	0.378	-0.117	0.637***	0.509***
	(0.643)	(0.644)	(0.647)	(0.252)	(0.134)	(0.095)
Rural Household	0.587	0.586	0.575	-0.680***	0.056	0.258***
	(0.372)	(0.371)	(0.376)	(0.108)	(0.062)	(0.064)
Child Characteristics:						
Girl	0.192	0.193	0.225			
	(0.390)	(0.390)	(0.393)			
Nr. of Older Brothers	-0.330	-0.326	-0.331			
	(0.330)	(0.330)	(0.331)			
Nr. of Older Sisters	-0.443	-0.435	-0.460			
	(0.295)	(0.298)	(0.297)			
Nr. of Younger Brothers	-0.064	-0.060	-0.080			
	(0.360)	(0.360)	(0.361)			
Nr. of Younger Sisters	-0.647**	-0.649**	-0.672**			
	(0.303)	(0.303)	(0.303)			
Initial Conditions:						
Aged 6 in 2003	0.480	0.474	0.487			
	(0.358)	(0.360)	(0.357)			
Aged 6 in 2004	1.368***	1.370***	1.384***			
	(0.490)	(0.491)	(0.492)			
Aged 6 in 2005	-0.018	-0.021	-0.017			
	(0.625)	(0.626)	(0.628)			
Shape of Hazard:						
Age Interval 6-7	-1.302***	-1.302***	-0.436			
	(0.378)	(0.378)	(0.439)			
Age Interval 7-8	-1.066**	-1.067**	-0.091			
	(0.508)	(0.508)	(0.575)			
Age Interval 8-9						
Age Interval 9-10						
Age Interval 10-11						

West Bengal	1) Model 1) School	2) Model 2) School	3) Model 3) School	4) Model 3) Economic Aut	5) Model 3) Dec-Making Aut	6) Model 3) Emotional Aut
Female Autonomy	-	0.014	0.557***	1.000	0.844***	-0.521***
		(0.014)	(0.191)	(0.000)	(0.057)	(0.069)
Caste:						
Scheduled Caste	0.018	0.015	0.016	1.000	1.000	1.000
	(0.142)	(0.142)	(0.141)	(0.000)	(0.000)	(0.000)
Scheduled Tribe	-0.210	-0.206	-0.204	-1.296***	-1.146***	-0.467***
	(0.259)	(0.258)	(0.255)	(0.239)	(0.202)	(0.148)
Other Backward Caste	0.111	0.114	0.112	-0.755***	-0.198	0.392***
	(0.324)	(0.324)	(0.322)	(0.272)	(0.230)	(0.138)
Religion:						
Muslim	-0.473***	-0.460***	-0.467***	-0.207***	-0.290***	-0.861***
	(0.139)	(0.140)	(0.137)	(0.043)	(0.058)	(0.131)
Highest Education:						
Ma: Completed Prim.	0.201***	0.198***	0.197***	-0.065***	-0.102***	0.201***
	(0.032)	(0.032)	(0.031)	(0.023)	(0.024)	(0.011)
Pa: Completed Prim.	0.137	0.138	0.134	-0.126***	-0.143**	0.255*
	(0.119)	(0.119)	(0.117)	(0.044)	(0.059)	(0.133)
Pa: Completed Sec.	0.411	0.412	0.402	0.128*	-0.085	0.076
	(0.255)	(0.255)	(0.253)	(0.076)	(0.101)	(0.228)
Wealth:						
2nd Quintile	0.398***	0.396***	0.397***	-0.049	0.065	-0.064
	(0.126)	(0.126)	(0.124)	(0.051)	(0.068)	(0.153)
3rd Quintile	0.884***	0.878***	0.875***	0.016	0.060	0.139
	(0.164)	(0.164)	(0.162)	(0.058)	(0.078)	(0.176)
4th Quintile	1.586***	1.575***	1.573***	0.107	0.080	0.584***
	(0.217)	(0.217)	(0.214)	(0.069)	(0.092)	(0.207)
5th Quintile	1.834***	1.811***	1.809***	0.424***	0.278**	1.003***
	(0.277)	(0.277)	(0.274)	(0.086)	(0.116)	(0.261)
Rural Household	0.740***	0.762***	0.752***	-0.204***	-0.445***	-0.894***
	(0.167)	(0.168)	(0.164)	(0.050)	(0.066)	(0.150)
Child Characteristics:						
Girl	0.081	0.083	0.084			
	(0.115)	(0.115)	(0.114)			
Nr. of Older Brothers	-0.221**	-0.217**	-0.217**			
	(0.092)	(0.092)	(0.091)			
Nr. of Older Sisters	-0.059	-0.061	-0.066			
	(0.083)	(0.084)	(0.083)			
Nr. of Younger Brothers	-0.071	-0.067	-0.075			
	(0.100)	(0.100)	(0.099)			
Nr. of Younger Sisters	-0.253**	-0.255**	-0.249**			
	(0.104)	(0.104)	(0.103)			
Initial Conditions:						
Aged 6 in 2003	0.360***	0.360***	0.362***			
	(0.115)	(0.115)	(0.114)			
Aged 6 in 2004	0.754***	0.753***	0.748***			
	(0.141)	(0.141)	(0.140)			
Aged 6 in 2005	-0.256	-0.255	-0.243			
	(0.231)	(0.231)	(0.230)			
Shape of Hazard:						
Age Interval 6-7	-0.122	-0.118	-0.134			
	(0.149)	(0.148)	(0.145)			
Age Interval 7-8	0.441*	0.449*	0.426*			
	(0.241)	(0.239)	(0.235)			
Age Interval 8-9	-0.062	-0.052	-0.081			
	(0.336)	(0.334)	(0.330)			
Age Interval 9-10	-0.757	-0.750	-0.781			
	(0.581)	(0.579)	(0.577)			
Age Interval 10-11						

Uttar Pradesh	1) Model 1) School	2) Model 2) School	3) Model 3) School	4) Model 3) Economic Aut	5) Model 3) Dec-Making Aut	6) Model 3) Emotional Aut
Female Autonomy	-	0.008	1.001***	1.000	0.305***	-0.088***
		(0.009)	(0.313)	(0.000)	(0.034)	(0.030)
Caste:						
Scheduled Caste	-0.020	-0.020	-0.020	1.000	1.000	1.000
	(0.088)	(0.089)	(0.088)	(0.000)	(0.000)	(0.000)
Scheduled Tribe	0.388	0.375	0.389	0.443***	0.510***	1.730***
	(0.289)	(0.287)	(0.290)	(0.100)	(0.121)	(0.313)
Other Backward Caste	-0.194***	-0.193***	-0.194***	-0.056**	-0.018	0.112
	(0.072)	(0.072)	(0.072)	(0.024)	(0.029)	(0.075)
Religion:						
Muslim	-0.677***	-0.678***	-0.677***	-0.028	-0.071**	-0.140*
	(0.083)	(0.083)	(0.083)	(0.025)	(0.030)	(0.078)
Highest Education:						
Ma: Completed Prim.	0.064***	0.063***	0.064***	0.027***	0.023***	0.063***
	(0.016)	(0.016)	(0.016)	(0.006)	(0.007)	(0.018)
Pa: Completed Prim.	0.443***	0.444***	0.443***	-0.039*	-0.054**	0.151**
	(0.062)	(0.063)	(0.062)	(0.022)	(0.026)	(0.068)
Pa: Completed Sec.	0.887***	0.884***	0.887***	0.106***	-0.012	0.397***
	(0.109)	(0.109)	(0.109)	(0.034)	(0.041)	(0.106)
Wealth:						
2nd Quintile	0.231***	0.231***	0.231***	0.032	-0.043	-0.001
	(0.072)	(0.072)	(0.072)	(0.027)	(0.033)	(0.085)
3rd Quintile	0.423***	0.424***	0.423***	0.048	-0.035	0.236**
	(0.086)	(0.086)	(0.086)	(0.031)	(0.037)	(0.097)
4th Quintile	0.508***	0.508***	0.508***	-0.001	-0.070*	0.421***
	(0.101)	(0.101)	(0.101)	(0.034)	(0.041)	(0.107)
5th Quintile	1.218***	1.216***	1.217***	0.247***	-0.041	0.791***
	(0.142)	(0.142)	(0.142)	(0.044)	(0.053)	(0.136)
Rural Household	0.341***	0.354***	0.340***	-0.181***	-0.508***	-0.552***
	(0.097)	(0.099)	(0.097)	(0.026)	(0.032)	(0.082)
Child Characteristics:						
Girl	-0.175***	-0.176***	-0.175***			
	(0.062)	(0.062)	(0.062)			
Nr. of Older Brothers	-0.032	-0.031	-0.032			
	(0.046)	(0.046)	(0.046)			
Nr. of Older Sisters	-0.001	-0.001	-0.001			
	(0.039)	(0.039)	(0.039)			
Nr. of Younger Brothers	-0.061	-0.061	-0.061			
	(0.049)	(0.049)	(0.049)			
Nr. of Younger Sisters	0.043	0.044	0.043			
	(0.050)	(0.050)	(0.050)			
Initial Conditions:						
Aged 6 in 2003	0.530***	0.530***	0.529***			
	(0.070)	(0.070)	(0.070)			
Aged 6 in 2004	0.612***	0.613***	0.612***			
	(0.080)	(0.080)	(0.080)			
Aged 6 in 2005	-0.008	-0.009	-0.008			
	(0.131)	(0.131)	(0.131)			
Shape of Hazard:						
Age Interval 6-7	-0.304***	-0.302***	-0.304***			
	(0.103)	(0.104)	(0.103)			
Age Interval 7-8	0.230	0.232	0.229			
	(0.172)	(0.174)	(0.172)			
Age Interval 8-9	0.036	0.039	0.035			
	(0.222)	(0.224)	(0.222)			
Age Interval 9-10	-0.665**	-0.661**	-0.666**			
	(0.320)	(0.322)	(0.320)			
Age Interval 10-11	-0.378	-0.384	-0.378			
	(1.194)	(1.194)	(1.194)			

North Eastern States	1) Model 1) School	2) Model 2) School	3) Model 3) School	4) Model 3) Economic Aut	5) Model 3) Dec-Making Aut	6) Model 3) Emotional Aut
Female Autonomy	-	0.024*** (0.009)	2.417*** (0.047)	1.000 (0.000)	0.246*** (0.010)	-0.115*** (0.035)
Caste:						
Scheduled Caste	-0.077 (0.114)	-0.076 (0.114)	-0.089 (0.112)	1.000 (0.000)	1.000 (0.000)	1.000 (0.000)
Scheduled Tribe	-0.213** (0.092)	-0.215** (0.090)	-0.210** (0.087)	0.686*** (0.110)	1.763*** (0.036)	-0.658*** (0.042)
Other Backward Caste	-0.019 (0.105)	-0.022 (0.101)	-0.015 (0.096)	0.141 (0.172)	1.622*** (0.054)	-0.565*** (0.048)
Religion:						
Muslim	-0.221* (0.119)	-0.195* (0.112)	-0.208** (0.101)	-0.238*** (0.027)	-0.313*** (0.030)	-0.315*** (0.092)
Highest Education:						
Ma: Completed Prim.	0.177*** (0.016)	0.174*** (0.016)	0.173*** (0.016)	0.423*** (0.028)	0.080*** (0.008)	-0.049*** (0.008)
Pa: Completed Prim.	0.424*** (0.065)	0.422*** (0.065)	0.420*** (0.063)	0.033* (0.019)	0.124*** (0.021)	0.007 (0.065)
Pa: Completed Sec.	0.767*** (0.117)	0.761*** (0.117)	0.748*** (0.116)	0.176*** (0.030)	0.186*** (0.033)	0.149 (0.100)
Wealth:						
2nd Quintile	0.433*** (0.085)	0.431*** (0.085)	0.435*** (0.084)	0.022 (0.029)	0.095*** (0.032)	0.050 (0.099)
3rd Quintile	0.901*** (0.094)	0.894*** (0.093)	0.911*** (0.093)	0.147*** (0.029)	0.198*** (0.032)	0.101 (0.099)
4th Quintile	1.654*** (0.117)	1.632*** (0.117)	1.652*** (0.116)	0.230*** (0.033)	0.207*** (0.036)	0.309*** (0.110)
5th Quintile	1.921*** (0.145)	1.886*** (0.145)	1.917*** (0.144)	0.450*** (0.038)	0.158*** (0.042)	0.695*** (0.127)
Rural Household	-0.135 (0.086)	-0.137* (0.083)	-0.136* (0.079)	-0.056*** (0.019)	-0.034 (0.021)	0.098 (0.064)
Child Characteristics:						
Girl	0.086 (0.064)	0.086 (0.064)	0.085 (0.064)			
Nr. of Older Brothers	0.129** (0.053)	0.126** (0.053)	0.128** (0.053)			
Nr. of Older Sisters	0.016 (0.044)	0.017 (0.044)	0.019 (0.044)			
Nr. of Younger Brothers	-0.081 (0.053)	-0.085 (0.053)	-0.086 (0.053)			
Nr. of Younger Sisters	-0.030 (0.056)	-0.034 (0.056)	-0.034 (0.056)			
Initial Conditions:						
Aged 6 in 2003	0.307*** (0.068)	0.303*** (0.068)	0.302*** (0.068)			
Aged 6 in 2004	0.435*** (0.073)	0.437*** (0.073)	0.433*** (0.073)			
Aged 6 in 2005	0.047 (0.119)	0.043 (0.119)	0.041 (0.118)			
Shape of Hazard:						
Age Interval 6-7	-0.119 (0.077)	-0.117 (0.077)	-0.121 (0.076)			
Age Interval 7-8	0.534*** (0.113)	0.539*** (0.113)	0.528*** (0.113)			
Age Interval 8-9	0.490*** (0.158)	0.495*** (0.157)	0.482*** (0.157)			
Age Interval 9-10	0.111 (0.258)	0.112 (0.258)	0.097 (0.257)			
Age Interval 10-11	0.640 (0.632)	0.637 (0.633)	0.602 (0.632)			

Notes: (i) Estimates are based on the sample of women with children aged 6-11 at the beginning of the academic year April 2005. (ii) Model (1): duration specification without female autonomy variable, results reported in column (1); Model (2): duration specification with female autonomy indices, results reported in column (2); Model (3): structural equation model specification, results reported in columns (3) to (6). (iii) Dependent Variable in columns 1), 2) and 3): Dummy whether child enters school; Dependent variable in column 4): economic autonomy, in column 5) decision-making autonomy and in column 6) emotional autonomy. (iv) Standard Errors reported in parentheses. (v) * p<0.1, ** p<0.05, *** p<0.01;

Appendix 4: Correlations between Latent Variables in Model (3), Coefficients (Standard Errors)

All India	Economic Autonomy	Decision-Making Autonomy	Emotional Autonomy
Economic Autonomy	1.000 (0.000)	0.762*** (0.099)	1.000 (0.000)
Decision-Making Autonomy		1.000 (0.000)	-0.274*** (0.101)
Emotional Autonomy			1.000 (0.000)

Gujarat	Economic Autonomy	Decision-Making Autonomy	Emotional Autonomy
Economic Autonomy	1.000 (0.000)	0.956*** (0.044)	1.000 (0.000)
Decision-Making Autonomy		1.000 (0.000)	-0.183*** (0.034)
Emotional Autonomy			1.000 (0.000)

Haryana	Economic Autonomy	Decision-Making Autonomy	Emotional Autonomy
Economic Autonomy	1.000 (0.000)	0.452*** (0.049)	1.000 (0.000)
Decision-Making Autonomy		1.000 (0.000)	-1.058*** (0.145)
Emotional Autonomy			1.000 (0.000)

Karnataka	Economic Autonomy	Decision-Making Autonomy	Emotional Autonomy
Economic Autonomy	1.000 (0.000)	0.872*** (0.187)	1.000 (0.000)
Decision-Making Autonomy		1.000 (0.000)	-0.023 (0.055)
Emotional Autonomy			1.000 (0.000)

Mah	Economic Autonomy	Decision-Making Autonomy	Emotional Autonomy
Economic Autonomy	1.000 (0.000)	-0.643*** (0.091)	1.000 (0.000)
Decision-Making Autonomy		1.000 (0.000)	1.145*** (0.104)
Emotional Autonomy			1.000 (0.000)

Ori	Economic Autonomy	Decision-Making Autonomy	Emotional Autonomy
Economic Autonomy	1.000 (0.000)	-1.108*** (0.059)	1.000 (0.000)
Decision-Making Autonomy		1.000 (0.000)	0.464*** (0.059)
Emotional Autonomy			1.000 (0.000)

Punjab	Economic Autonomy	Decision-Making Autonomy	Emotional Autonomy
Economic Autonomy	1.000 (0.000)	0.771*** (0.099)	1.000 (0.000)
Decision-Making Autonomy		1.000 (0.000)	-0.287*** (0.092)
Emotional Autonomy			1.000 (0.000)

Rajastan	Economic Autonomy	Decision-Making Autonomy	Emotional Autonomy
Economic Autonomy	1.000 (0.000)	-2.796*** (0.129)	1.000 (0.000)
Decision-Making Autonomy		1.000 (0.000)	0.171*** (0.018)
Emotional Autonomy			1.000 (0.000)

TN	Economic Autonomy	Decision-Making Autonomy	Emotional Autonomy
Economic Autonomy	1.000 (0.000)	-1.295*** (0.077)	1.000 (0.000)
Decision-Making Autonomy		1.000 (0.000)	0.331*** (0.043)
Emotional Autonomy			1.000 (0.000)

WB	Economic Autonomy	Decision-Making Autonomy	Emotional Autonomy
Economic Autonomy	1.000 (0.000)	0.701 (0.427)	1.000 (0.000)
Decision-Making Autonomy		1.000 (0.000)	-0.064 (0.074)
Emotional Autonomy			1.000 (0.000)

UP	Economic Autonomy	Decision-Making Autonomy	Emotional Autonomy
Economic Autonomy	1.000 (0.000)	-0.077 (0.081)	1.000 (0.000)
Decision-Making Autonomy		1.000 (0.000)	0.355*** (0.020)
Emotional Autonomy			1.000 (0.000)

NE States	Economic Autonomy	Decision-Making Autonomy	Emotional Autonomy
Economic Autonomy	1.000 (0.000)	-2.980*** (0.066)	1.000 (0.000)
Decision-Making Autonomy		1.000 (0.000)	0.229*** (0.013)
Emotional Autonomy			1.000 (0.000)

Notes: (i) Estimates are based on the sample of women with children aged 6-11 at the beginning of the academic year April 2005. (ii) Estimates are derived from Structural Model specified in equation (8). (iii) Correlations between Economic and Emotional Autonomy have been set equation to one for identification. (iv) Standard Errors reported in parentheses; (v) * $p<0.1$, ** $p<0.05$, *** $p<0.01$