

## **Women and the Economy**

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### **Abstract**

Gender inequality in India arises from widespread societal attitudes that prioritize the economic and social status of men and, as a result, favour investment in male children. Policy actions have resulted in significant improvements in women's educational attainment and political representation, but there has been only limited progress in women's labour force participation, in rates of domestic violence and rape, and in abatement of trends in the selective abortion of girls. Attitudes pertaining to the status of women also show limited improvement.

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## 1. Introduction

In this chapter, we discuss the role of women in India's economy and their status in society over the course of their life cycle and over the seven decades since the country gained independence from Britain. Despite rapid advances in economic growth and a significant narrowing of the education gap between men and women, the economic participation of women continues to lag behind that of men and they continue to be under-valued and under-represented in government and in other key institutions of the state, the judiciary and the police. Many forms of gender inequality are a violation of women's rights, their low rates of economic participation are a drag on economic growth, and their scarcity in state institutions has substantive impacts on policy choice and the delivery of justice.

The chapter is structured as follows: Section 2 discusses the phenomenon of "missing women" in India and Section 3 the problem of violence against women. Section 4 discusses trends in women's education and labour force participation, with brief reference to women's property rights. Section 5 profiles women's representation in politics and in the criminal justice system, and Section 6 studies attitudes towards women and gender norms. Our aim is to profile the broad trends in different indicators of women's relative status in India, and to point to evidence concerning causes or consequences of changes in the outcomes considered. We do not attempt a comprehensive survey of the literature.

## 2. Male-biased population sex ratios

In India's 2011 census, only 48.5% of the country's population was comprised of women. This is unusually low, the share in advanced countries like the United States being 50.5%. India's Economic Survey of 2017-18 estimated the number of "missing women" as 63 million. Male-biased population sex ratios have been shown to have long-term consequences for the prevalence of prostitution and sexually transmitted infections, crime and violence, labor markets and old-age care (Amaral & Bhalotra, 2017; Angrist, 2002; Samuelson, 1985; Edlund, et al., 2013; Ebenstein & Sharygin, 2009). We discuss the causes behind this phenomenon and, where relevant, the policy actions that have been implemented to address it.

Women in India face excess mortality risk at every stage of life. Anderson and Ray (2012) estimate that 12% of women are missing at birth, 25% die in childhood, 18% in their reproductive years and 45% die at older ages. These patterns have evolved over time, see Figure 1A which depicts the share of females in the population in five-year age bins, for the years 1950, 1980 and 2020. We observe three interesting tendencies. First, the sex ratio at birth has become increasingly male-biased over time. In 1950, the gender ratio at birth was only slightly below 50%, consistent with the slightly higher share of boy children born across the world. By 1980, this share had declined to 48% and by 2020, to 47.5%. Second, we observe an increase in the share of females in higher age cohorts, particularly after age 50, consistent with global trends in higher life expectancy of women compared to men and despite the challenges faced by widows in India (Dreze and Srinivasan, 1997, Agarwal, 1998). Third, in a reversal of the early-age pattern, the share of women at older ages is more female-biased in 2020 than earlier. This likely reflects an overall improvement in health care provision, including declining maternal mortality, partly arising from gender quotas in village councils (Bhalotra, et al., 2023).

The biased gender ratio *at birth* reflects selective abortion of girls. Selective miscarriage is unlikely as miscarriage risks are larger for boys (Waldron, 1983; Low, 2012). Girl abortion has risen sharply

since the widespread availability of ultrasound technology that enables detection of foetal gender (Bhalotra & Cochrane, 2010). Ultrasound scanners were first imported in the mid-1980s and local production began in the mid-1990s. Sex selection tends to intensify as families reach their desired fertility size and, for most families this margin is at the second or third birth. Consistent with this, the sex ratio becomes male-biased and second and higher-order births, driven by families who have not yet had a son. Figures 1B and Figure A1B show a divergence of the birth sex ratio between families that do and do not have at least one son from the mid-1980s onward. There is limited evidence of improvements over time. The main reason for this appears to be that desired fertility has declined. Even financial incentives for having girl children have proven unable to reverse the constraints posed by smaller family sizes (Anukriti, 2018).

The skewed gender ratio *at higher ages* partly reflects persistence of the birth ratio, and partly continuing discrimination against girls and women. Households with girl children spend significantly less time on child care (Barcellos, et al., 2014), boys are more likely to be breastfed (Jayachandran & Kuziemko, 2011) and receive vaccinations or vitamin supplements (Pande & Yazbeck, 2003) and fewer girl children receive necessary surgeries than boys (Ramakrishnan et al., 2011). Using rainfall and income shocks respectively, Rose (1999) and Bhalotra (2010) document that newborn girls are less likely to survive when conditions become less favourable.

Before ultrasound was available, families exercised son preference by continuing fertility until the desired number of sons was born, and survived. As a result, girls were disproportionately more likely to be in larger families with fewer resources per child. Anukriti et al. (2022) investigate how the more recent tendency to substitute selective abortion for fertility continuation has impacted these choices. They show that it has led to a decline in fertility, a narrowing of the gap between desired and undesired fertility and an increase in post-birth investments including breastfeeding and vaccination in girls relative to boys. As a result, excess mortality of girls relative to boys between birth and age five has fallen. They estimate that there nevertheless continues to be a deficit of girls -- for every three girls that are aborted, they estimate that one additional girl survives among those that are born.

Entrenched societal preference for sons has been attributed to social norms of patrilineality (property is inherited by male descendants), and patrilocality (couples are expected to reside with the husband's family). Chakraborty and Kim (2010) find, using the 1901 Indian Census, that the sex-ratio was more male-skewed in the northern zones, where patrilocal norms have historically been more prevalent. These norms may, in turn, have been moulded by economic considerations such as the requirements of historical agriculture. Areas more suitable for plough agriculture had less need for female labour, leading to lower female labour force participation and a more male-biased gender ratio (Alesina, et al., 2013; Carranza, 2014; Basu, 1992). Son preference has also been linked to dowry. On the premise that gold is an integral part of dowry payments in India, Bhalotra et al. (2020) analyse monthly variation in gold prices on world commodity markets as generating variation in the cost of dowry. They show that this is mirrored in male relative to female survival rates. Initially this shows up as excess girl neonatal mortality but, after ultrasound is available, as girl foeticide. Surviving girls are also more likely to be stunted if their birth coincides with a gold price inflation shock. This is a concern as, in contrast to trends in other parts of the world, and despite the legal ban on the practice in India, the real value of dowry payments has risen substantially in India over time (Anderson, 2007; Rao, 1993), though there is some evidence of a decline after 1975 (Chiplunkar & Weaver, 2021).

The Indian government, at both federal and state levels, has implemented many policies aimed at improving the population sex ratio. The Pre-Conception and Pre-Natal Diagnostic Techniques (PC&PNDT) Act was enacted in 1994 to ban prenatal sex detection. In the first 10 years of this Act, 22 of the 35 states in India did not report a single violation (UNFPA, 2010), and there has been no improvement in the gender ratio at birth since its enactment. However, it has been argued that in the absence of the PC&PNDT Act, the share of girls at birth would have declined by up to 20 additional percentage points (Nandi & Deolalikar, 2013).

In the 1980s and 1990s, the Hindu Succession Act of 1956 was amended in several states to grant daughters the same inheritance rights as those of sons. We might expect this to have increased women's financial independence and bargaining power within the household. Consistent with this, Deininger et al. (2013) find that age of marriage and level of schooling rose after the enactment of these laws. However, the law had the unintended impact of intensifying son preference in fertility, generating an increase in female feticide, increased excess female neonatal mortality and more son-biased fertility stopping (Bhalotra, et al., 2020). These results demonstrate how persistent social norms can defeat the purpose of legal reform.

In 2015, the “Beti Bachao Beti Padhao” (save daughters, educate daughters) program was launched to prevent gender-biased sex-selection and promote education and participation of the girl child. Over the period 2016-19, 79% of the funds allocated under this scheme were spent on media advocacy.<sup>1</sup> Previous studies have found positive impacts of media messages on behaviour, for example through strong role model effects of exposure to women characters on TV (Jensen & Oster, 2009; La Ferrara et al., 2012). A recent evaluation finds that the scheme worked to improve parent perceptions of the value of girls to the economy and to society (NCAER, 2021). Dasgupta and Sharma (2021) furthermore find that the gender disparity in infant mortality has narrowed, and that household investments in girls have increased, at least in the short term.

### **3. Violence Against Women**

Female foeticide and other forms of gender-based violence constitute a stark expression of social attitudes to women. In this section we consider violence against adult women. Domestic violence has not declined between 2005/6 and 2015/16 (NFHS data). In both survey years, 24% of women reported experiencing physical or sexual violence from their spouse over the past 12 months. Nearly 86% of those who experienced violence had not spoken about this to anyone.<sup>2</sup> Women with no education were twice as likely as women with some education to have experienced violence (Figure 2A). The share of women experiencing spousal violence was much higher among women of scheduled castes and scheduled tribes (23%) than among women from other backward castes (18%) or higher castes (14%). Trends over time also varied by caste, with women from SC and OBC categories reporting increases in 2015 compared to 2005, while women of ST and higher caste categories reporting small declines.

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<sup>1</sup> <https://www.thehindu.com/news/national/beti-bachao-beti-padhao-whopping-80-of-funds-spent-on-media-campaigns-says-parliamentary-committee/article37922778.ece>, Accessed: 20. January 2022

<sup>2</sup> Police data tend to suffer from greater under-reporting of domestic violence than survey data, so here we present data from the NFHS, which took great care to design these questions following protocols designed to maintain the privacy of the female respondent and to encourage reporting.

Gender-based violence is subject to severe underreporting even in surveys where a lot of care is taken to ensure confidentiality of responses. Joseph et al. (2017) estimate that only one in three women who suffered from violence perpetrated by their husband stated so when questioned. One interpretation of the slight increases seen for some groups in the NFHS surveys is that women respondents are becoming more willing to report violence. Nevertheless, the absolute levels recorded are quite high and represent large scale violations of human rights and human dignity.

Gender-based violence can have large economic repercussions by reducing women's ability to access employment opportunities due to fear of such violence (Amaral et al., 2021; Siddique, 2022) or restricting their education choices. For example, Borker (2017) finds that women students in New Delhi are willing to choose a worse-rated college to avoid travel along routes that are perceived to be unsafe. In addition to street harassment of women, there is harassment of women in educational institutions and workplaces. Sharma (2023) shows that an awareness training intervention targeting men at colleges in Delhi University led to an improvement in their behaviour but that this appears to have been driven by social image concerns and not by an improvement in their intrinsic attitudes. It makes sense that attitudes may not be amenable to change at this stage of life, but earlier. Based on a large experiment run in schools in Haryana, Dhar et al. (2022) find that integrating training into the curriculum delivers positive changes in attitudes towards gender.

There is some evidence that male-biased population sex ratios lead to greater violence against women (Amaral & Bhalotra, 2017; Edlund, et al., 2013). Expanding employment opportunities for women relative to men can reduce violence against women (Aizer, 2010; Bhalotra, et al., 2021) or trigger male backlash (Erten and Keskin, 2021). Bhalotra et al. (2021a) demonstrate that whether labour market opportunities for women reduce or increase domestic violence depends upon women's access (in legal and social terms) to divorce. There is evidence that women's political representation at the local level increases reporting of crimes against women to the police, as well as arrests for such crimes (Iyer, et al., 2012), and the opening of women-staffed police stations and help desks may also have a significant effect on crime reporting (Amaral et al., 2021; Sukhtankar et al., 2021). In section 5, we consider the broader trends in women's representation in state institutions.

## **4. Women's Economic Participation**

### **4.1 Education**

India's women have historically had lower levels of educational attainment than their male counterparts. The 2011 census recorded only 65% of women as being literate, that is, able to read and write a simple statement about their everyday life, as compared to 82% of men. Among factors highlighted as reducing family incentives to invest in girls' education are lower labour market returns to education for women (Kingdon & Theopold, 2008; Kingdon, 1998)), patriarchal norms that assume women's education to primarily benefit their husband's household (Kambhampati & Rajan, 2008) or their match quality (Andrew & Adams, 2021), and the limited control that women have over their earnings (Field et al., 2021). There is not a lot of evidence for India on the role of labour demand trends which, in other countries, are increasingly favouring women, see (Deming & Noray, 2018; Galor & Weil, 1996); Bhalotra, Fernandez & Wang (2021).

Considerable progress has been made over the past five decades. Figure 3A as well as Figures A2A and A2B show how gross enrolment rates in primary, secondary and tertiary education have evolved

over time. The gross enrolment ratio for primary school rose from 60 for girls and 94 for boys in 1970 to 101 for girls and 99 for boys in 2020 respectively.<sup>3</sup> Following a constitutional amendment, education was declared a fundamental right in 2010 and every child aged 6 to 14 was entitled to free and compulsory primary education. Secondary school enrollment rates also show a strong trend. In 1970 only 14% of girls aged 14 to 18 were enrolled in school, but this share rose sharply after 2000, and reached 75% in 2014, on par with that of boys (Figure A2A). Secondary enrolment ratios have been stagnant for both genders since. Among factors that boosted girls secondary schooling are school infrastructure such as sex-segregated latrines (Adukia, 2017), and a scheme that awarded bicycles to girls to travel independently to school (Muralidharan & Prakash, 2017). As for tertiary education, in 1970, only 1 in 4 university students was female. Over the past 50 years the gender gap has continuously narrowed and since 2015, women in India are more likely to be enrolled in tertiary education than their male counterparts. The narrowing of gender enrolment gaps is reflected in a narrowing of the gender literacy gap since 1980. The remaining gender gap reflects the gap in older cohorts.

Learning lags enrolment in many developing countries, including India (Perera & Asadullah, 2019). Data from the Annual Status of Education Report (ASER) conducted by the NGO Pratham in 2018, show that at ages 14-16, 77% of girls can read at least a second grade text, very similar to the share for boys. However, in basic arithmetic, 50% of all boys are able to correctly solve a division problem compared to 44% of all girls. Girls also performed worse than boys in questions involving more complicated mathematics concepts.

## 4.2. Labour force Participation

Despite convergence of female with male education, a steady decline in fertility and rapid aggregate economic growth in the 1990s and 2000s, women's labour force participation rate (LFPR) remains well below that of men, and shows limited growth. In 1960 only 1 in four women were working relative to two of three men. Women's LFPR increased thereafter, peaking at 33 percent in 1972, since when it stagnated at around 30% for the next three decades (Figure 4A). Since 2005, it has shown a steady decline, culminating in a historic low of 17.5% in 2017. This contrasts unfavourably with women's LFPR in other emerging economies including China or Brazil which had rates of 60.5% and 55.1% in 2019, respectively. This is of concern both because excluding women from the economy compromises future economic growth (Chiplunkar & Goldberg, 2021; Klasen & Pieters, 2015) and because women's financial independence has been shown to influence their bargaining power within the household (McElroy & Horney, 1981; Bittman, et al., 2003; Browning, et al., 1994) with implications for investment in children (Afridi, et al., 2016; Qiang, 2008) and domestic violence (Aizer, 2010; Bhalotra, et al., 2021).

Even when women are in the labour force, they consistently earn less than men do. Figure 4B plots average weekly earnings adjusted for inflation between 1985 and 2010 by gender as reported in the Indian National Sample Survey. Average real wages have risen over time and the gender gap has decreased significantly. In 1985 men earned 50% more than women but by 2010, they earned 25% more. Deshpande et al. (2018) find that a substantial gender pay gap persists after adjusting for characteristics including education, consistent with labour market discrimination against women.

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<sup>3</sup> Gross enrollment ratios can be higher than 100, if children outside the relevant age range are still in the relevant schooling stage. This could be due to, among other reasons, late enrollment and lack of grade progression.

Low and declining female LFPR in India during a period of declining fertility and rapid growth has drawn considerable attention. Afridi et al. (2018) find that characteristics such as education can explain all of the gender LFP gap during 1987-1999 and that they account for half of the decline during 1999-2011, the other half being unexplained. Explanations put forward include an income effect whereby rising incomes for men lead to women having more time for leisure or childcare, resulting in a reduction in women's labor supply. In principle, as wages rise further, the opportunity cost of women's leisure will increase to a point where they join the labour force in larger numbers. These observations are consistent with the U-shaped cross-country relationship between female LFPR and per capita income (Goldin, 1994) and with evidence that female LFPR exhibits a countercyclical pattern and declines with increases in husband's earnings (Van der Klaauw, 1996; Bhalotra & Umana-Aponte, 2010).

However, the evidence from India does not strongly support the income effect explanation. Kaspos et al. (2014) estimate that the income effect accounts for nearly 10% of the total decline in female LFP between 2005 and 2010, while Chatterjee (2015) find only a negligible effect. Survey data indicate that one in three Indian women express an interest in working (Fletcher, et al., 2017). If all women that expressed interest in joining the work force did so, the female LFPR would increase by almost 80% (Field, et al., 2021). Further evidence indicative of demand-side constraints on women's employment emerges from analysis of longitudinal quarterly data for 2016-2019 (Deshpande & Singh, 2021). This study reveals that women drop in and out of employment and that supply-side factors play only a small role in explaining these movements. It also shows that the demonetization shock of 2016 had a more negative impact on women's than on men's employment. Similarly, evidence that India's Public Employment Guarantee Scheme (NREGA) generated jobs and wage increases among women (Azam, 2011), is consistent with demand-side constraints.

In relation to demand-side constraints acting to inhibit women's employment in India, it is notable that technological progress is, in general, shifting the structure of production in a manner that raises the relative demand for women's labour. The brawn-intensive task content of jobs is declining relative to the role of analytic and social skills (Rendall, 2013; Bhalotra, et al., 2021; Weidmann & Deming, 2021). More research on relative demand trends in India is merited. There is some evidence of a decline in the demand for female labour in agriculture, associated with mechanization. Afridi et al. (2020) find that by reducing the demand for labour in weeding, a task that is often undertaken by women, mechanization has led to a significantly greater decline in women's labour on Indian farms than of men's. Mehrotra and Parida (2017) find that the number of women employed in agriculture rose from 96 million in 1994 to 113 million in 2005, but fell by almost 30% over the next five years. Over this period, the non-manufacturing and service sectors showed an increase in female employment share from 1.7% to 6.6% and from 11.1% to 17.2%, but this did not fully compensate, delivering a net decline. Evidence from Time Use Surveys conducted in India in 1998-99 and 2019 is in line with this. Using these surveys for the six states surveyed in both years, Li (2023) finds that decreases in work time (especially paid work) were experienced by rural, but not urban women. Women report increased leisure time, such that the gender-gap in leisure shows a 50% decline across this period of about two decades.

Other explanations centre on constraints that prevent women from participating in the labour market. For example, women may lack knowledge about new job opportunities (Jensen, 2012). The finding in Sivasankaran (2014) of spillover effects of women's employment on the education and marriage decisions of younger sisters is consistent with information frictions, although it is also consistent with social norms changing as women join the labour force (Fogli & Veldkamp, 2011). As

indicated earlier, there is some evidence that women's LFPR is restricted by the risk of sexual harassment in public places (Amaral, et al., 2021; Siddique, 2022) which may contribute alongside childcare constraints (Le Barbanchon, et al., 2021) to women tending to seek work in a more restricted markets that lie in close proximity to their residence.

Patriarchal norms or, more broadly, male-biased gender norms, discourage LFPR in many contexts (Deshpande & Kabeer, 2021; Jayachandran, 2015; Costagliola, 2021; Alesina, et al., 2013; Bertrand, et al., 2015). The fact that the share of women in the work force is almost twice as large in female-owned than in male-owned firms may be indicative of gender-biased preferences (Chiplunkar & Goldberg, 2021). In experiments on online matrimonial sites, Afridi et al. (2023) and Dhar (2023) find that men are less likely to pursue a woman's profile if, other things equal, she is working, or indicates an intention to work after marriage. A survey of married couples in Madhya Pradesh finds that more than two-thirds of all women report that their husband is the primary decision-maker on whether they work, and 40% of couples differ on whether it is appropriate for women to work outside the home (Bernhardt, et al., 2018). Another study showed that providing women greater control over their earnings was shown to increase LFPR and change social norms regarding women's work (Field, et al., 2021).

If predominantly male employers erect barriers to women's employment, women might be led to seek self-employment. However, Indian women have historically had limited rights over property and, as discussed earlier, until recently, ancestral property was passed on to sons only (Agarwal 1994). Moreover, there is evidence that women face barriers to credit (Chiplunkar & Goldberg, 2021; de Mel, et al., 2009). Microfinance initiatives have arisen to make loans available and affordable to women, but with mixed results (Banerjee, et al., 2015). Other policy measures with potential include employment quotas and government initiatives focused on skilling and manufacturing to increase women's economic activity (Fletcher, et al., 2017).

The limited participation of women comes at a cost not only to women and families but also to the economy. In 2015, McKinsey Global Institute estimated that increasing women's labour force participation by 10 percentage points could increase India's GDP by \$0.7 trillion over the next decade, and that achieving full gender parity along several metrics could result in an increase in GDP of 60%.

## **5. Women's Representation in State Institutions**

In addition to facing barriers to participating in economic and social life in India, women are under-represented in leadership positions in India's governance institutions. This is of particular concern, since many studies have documented that women leaders have positive impacts on women's outcomes, suggesting that increasing women's role in policymaking and leadership more generally could improve the status of women across domains. For instance, there is evidence that increasing women's presence in political office leads to increased investment in health that differentially benefits women (Bhalotra & Clots-Figueras, 2014; Bhalotra, et al., 2023), increased reporting of crimes against women (Iyer et al. 2012), and increased aspirations and educational attainment for girls (Beaman, et al., 2012).<sup>4</sup>

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<sup>4</sup> Bhalotra et al. 2023 show that the implementation of gender quotas for women in politics leads to sharp falls in maternal mortality, both in a cross-country panel, and across states in India.



Women are under-represented in political office in India. In the 2019 parliamentary elections, only 14% of elected representatives were women, up from less than 8% in 2000 (Figure 5A). Women's representation in state legislative assemblies shows similar patterns: a noticeable rising trend after 2000. It is notable that the share of women among elected representatives is considerably higher than the share of women among all candidates (Figure 5A), suggesting that a primary barrier to women's representation is becoming a candidate. What might explain this lack of women candidates? It is not clear that it is the absence of role models because the event of a woman winning an election does not result in greater female candidacy in subsequent elections in that constituency (Bhalotra, et al., 2018). Iyer and Mani (2019) present survey evidence that women lag behind men on factors such as knowledge about the functioning of political institutions, self-assessments of leadership skills and their ability to influence household decisions. In addition, women face significant mobility restrictions that may affect their ability to build political networks and campaigns. It is noticeable that very few parties in India have women leaders, which may play a role in the recruitment of women candidates. A 1993 constitutional amendment mandated the provision of a one-third gender quota in district, intermediate and village-level councils, and a large literature has examined the effects of this quota on economic and political outcomes (see Clots-Figueras & Iyer, 2022). In 2023, India's parliament passed a bill to implement a one-third quota for national and state legislatures.

Women are also under-represented in the criminal justice system. Figure 5B shows women's share of appointments to the Indian Police Service. In 1985, approximately 5% of newly appointed IPS officers were women. In the next decade, this share rose significantly to 11%, and then experienced a period of stagnation before rising again after 2005 to reach roughly 14%. Recognizing this gender gap, many states enacted laws that mandated a 33% quota for women in their police forces, alongside other measures such as establishing all-women police stations (Jassal, 2020). Despite these measures, the share of women in the police remains low. Feminization of the police force has been associated with reductions in crime against women (Amaral, et al., 2021; Perova & Reynolds, 2017; Miller & Segal, 2019).

Figure A3B shows the share of female judges in the Indian lower judiciary courts between 2010 and 2018. Over this period, the share of women judges has increased from 25% to 32%. However, there is significant regional variation—in Bihar 10% of judges were women compared to 73% in Meghalaya. Even though there are no gender quotas for the higher courts, several states have implemented reservations between 2004 and 2017, that range between 30% and 35% for women in the lower judiciary (Ghosh, et al., 2018). This probably contributes to the rise in the representation of women in the past decade. The Supreme Court of India has seen only 11 female judges since 1950, five of whom were appointed after 2015.

## 6. Attitudes and Gender Norms

We have mentioned societal gender norms as influencing parental preferences for daughters and as a potential deterrent to women's full participation in the economy. In this section, we document survey evidence on elicited attitudes regarding women's work, education, perceived competence and autonomy in decision-making. The direction of causation is unclear. In some settings a wife working outside the home is considered a source of shame to the husband as it may suggest that he is not able to provide for his family (Boudet, et al., 2013; Bernhardt, et al., 2018). Such negative perceptions, which may be shared by men and women alike, may prevent women from joining the work force (Akerlof & Kranton, 2000; Bertrand, et al., 2015). While social norms may affect this behaviour, they may also reflect this behaviour. For instance, if a lot of women enter the workforce, the

associated social stigma may be lowered, or women may discover from the experience of other women that a family-work life balance can be achieved (Fogli & Veldkamp, 2011).

Using the Indian World Values Surveys for the years 1990 to 2012 and the National Health and Family Surveys for years 2005 to 2015, we find considerable variation in how societal views on women's roles have changed over the past three decades. Some views have become more detrimental to women's participation, while others have become less so. Interestingly, these trends are similar across male and female respondents, with greater improvements in men's gender attitudes in some cases.

In 1990, 90% of male and female respondents agreed with the statement that "Pre-school children suffer with a working mother" and, by 2012, this share had fallen to 77% of men and 75% of women (Figure A4A). While the decline is marked, the share of Indians that subscribe to conservative norms regarding women's role in child rearing is high and is reinforced by other questions in the survey. For instance, in 2012, 80% of male and female respondents agreed that a woman needs to have children in order to have a fulfilled life and nearly two-thirds of women were of the opinion that being a housewife was just as fulfilling as working for pay—in fact, this reflected an *increase* from less than half of women who agreed with this statement in 1990. Attitudes to childcare roles appear not to fully reflect in attitudes to labour market participation. In 1990 as many as 80% of male and 85% of female respondents thought that both spouses should contribute to income, and in 2001 these shares were roughly the same. What this may capture is that men do not want women to have careers, but that many families see an advantage to having a second earning member (possibly in a job that does not have the demands of a career).

Views on women's higher education are not much more encouraging. In 1995 32% of men and 24% of women agreed with the statement "University is more important for a boy than for a girl". Over the next decade, the share of men agreeing with this statement rose to 44%, before declining to 38.5% in 2012. Similarly, the share of women who agreed increased to 32% in 2006 and remained at that level in 2012 (Figure 6A). This is despite women's educational attainment converging to that of men's over this period. These sticky attitudes may be a factor that reconciles rising education with declining or stagnant labour force participation of women.

A further barrier to women's success may be the perception that women are less capable than men and this is a perception that appears to be intensifying over time. In 1995, almost 50% of all men stated that men make better political leaders than women. By 2012, this share increased to 58%. The increasing conservativeness of this view is also evident among women: 34% of women agreed with this view in 2006, rising to 44% in 2012 (Figure 6B). Similarly, two thirds of men and one third of women posited in 2006 that men make better business executives than women do. By 2012 the share of women who agreed increased by almost 10 percentage points while the share of men that agreed declined by the same magnitude.

Despite attitudes failing to adjust, the data show substantial improvements in women's decision making within households over the past two decades. In 2005, 37% of women stated that their partner or someone else in their household had the final say when it came to making large household purchases, and this declined to 23% in 2015 (Figure A4B). In 2005, one in three women stated that they did not have the final say in decisions on their own health care versus one in five women in 2015. Finally, the share of women claiming that they did not have the final say in the decision to visit their family or relatives has declined by 7 percentage points to 23%.

Attitudes towards violence against women reveal that a disturbingly high share of both men and women agree that male violence towards their female partners is “justified” under circumstances such as the woman going out without telling her husband, arguing with him, neglecting the household, refusing sexual intercourse or showing disrespect for her in-laws. In 2005, 54% of women and 51% of men agreed that violence against women was justified under these circumstances. By 2015, these shares had fallen only very slightly, more among men than women.

## 7. Conclusions

India is often characterised as a land of complexity and contradictions. Nowhere is this more clear than in looking at the position of women. In many families, women and girls are revered, respected and protected as mother, sister and daughter. Yet aggregate statistics reveal persistent gender inequality in both opportunities and outcomes. Women have caught up and even overtaken men in education (as in many other countries), but this is not reflected in increased labour force participation. Gender gaps in indicators of childhood health investments have narrowed and maternal mortality has fallen, although the fall in maternal mortality lies below international targets. The share of women in politics and the criminal justice system has risen, even if it remains well below parity. What is possibly most concerning, because it is the result of deliberate actions, is that girls are still being selectively aborted and that women and girls are unsafe on the streets and unsafe in the workplace.

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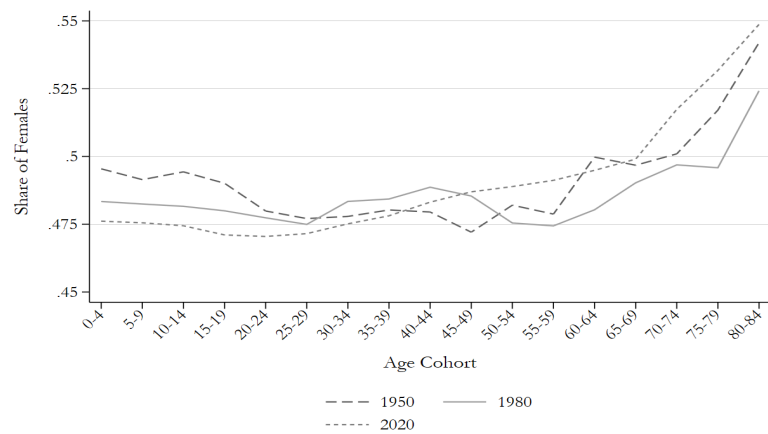
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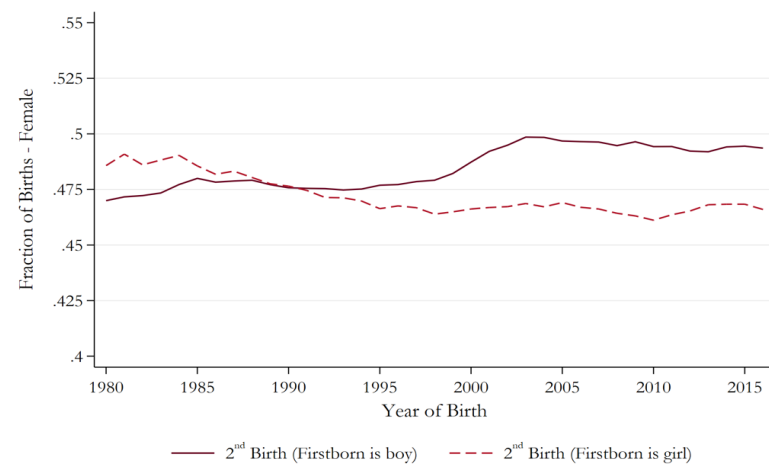
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**Figure 1: Trends in India's gender ratio**

*A. Population gender ratio by age cohort*



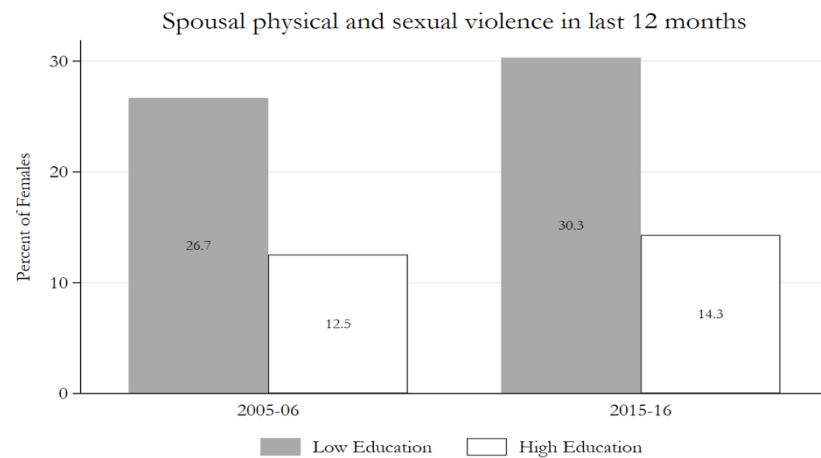
*B. Fraction of second births that are female, by gender of first-born child*



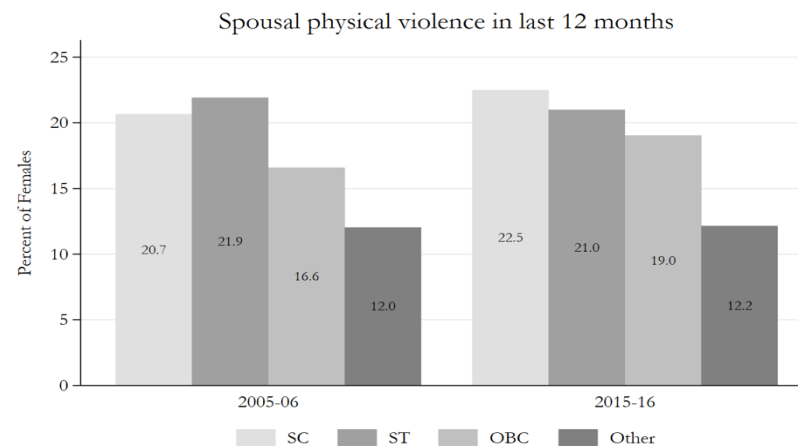
Sources: World Population Prospects 2019, Department of Economics and Social Affairs, United Nations (Figure 1A); National Family Health Surveys of 1992-93, 1998-99, 2005-06 and 2015-16 (Figure 1B).

**Figure 2: Trends in gender-based violence**

*A. Gender-based violence by education*



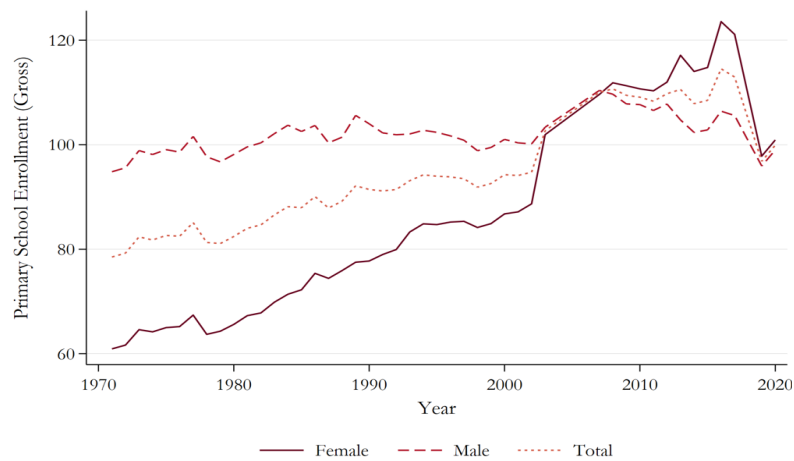
*B. Gender-based violence by caste category*



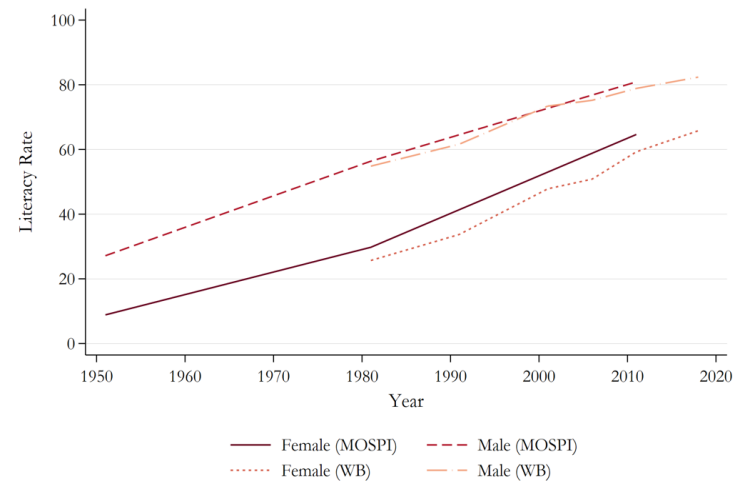
Source: National Family Health Surveys of 2005-06 and 2015-16. Notes: Figures show the percentage of women respondents who report experiencing physical or sexual violence from their spouse within the last 12 months. "Low education" refers to women who did not complete primary school; "high education" refers to women who completed primary school or later. "SC" refers to Scheduled Caste households who are at the bottom of the Hindu caste hierarchy; "ST" refers to Scheduled Tribes who are indigenous people outside the caste hierarchy; "OBC" refers to the middle castes; "Other" includes higher caste households.

**Figure 3: Trends in women's education enrolment and attainment**

*A. Gross enrollment ratio (primary education)*



*B. Literacy rates for men and women*



Sources: World Development Indicators, World Bank (Figure 23A); World Development Indicators and Ministry of Statistics and Program Implementation (Figure 3B). Notes: The gross enrollment ratio for primary school is calculated by dividing the number of students enrolled in primary education regardless of age by the population of the age group which officially corresponds to primary education. The literacy rate is calculated as the share of the population above age 15 that can both read and write with understanding a short statement about their everyday life.

**Figure 4: Trends in labor for participation and the gender wage gap**

*A. Labor force participation rates for men and women*



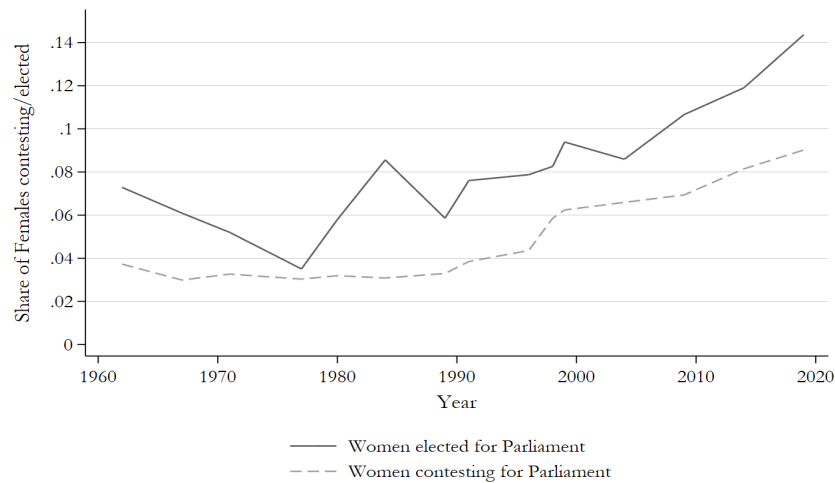
*B. Real average weekly earnings for men and women*



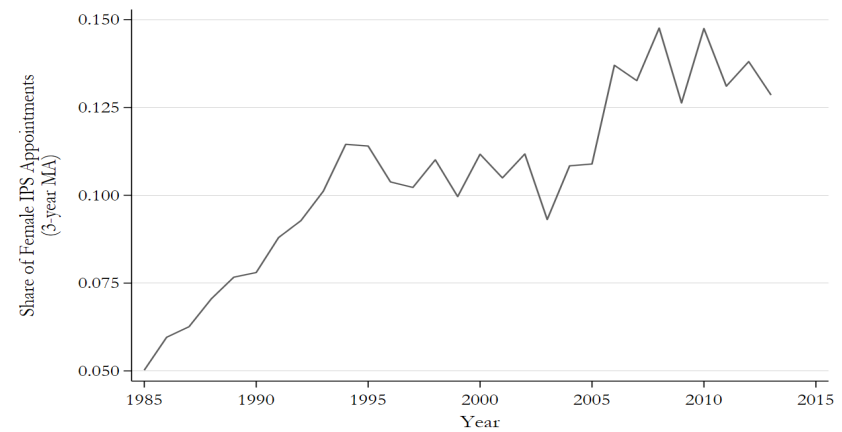
Source: Several reports of National Sample Survey (NSS) reports published by Ministry of Statistics and Program Implementation, as reported in Nikore (2019) for Figure 4A. NSS data compiled by Janneke Pieters and International Monetary Fund (IMF) for Figure 3B. Notes: The Labor Force Participation Rate (LFPR) is defined as the number of persons aged 15 and over who are employed or unemployed and looking for a job within the last week divided by the total working-age population. Figure 4B shows average weekly earnings for workers between the ages 20-59 by gender, deflated using the consumer price index provided by the IMF.

**Figure 5: Trends in women's representation in governance institutions**

*A. Women's representation in national parliament*



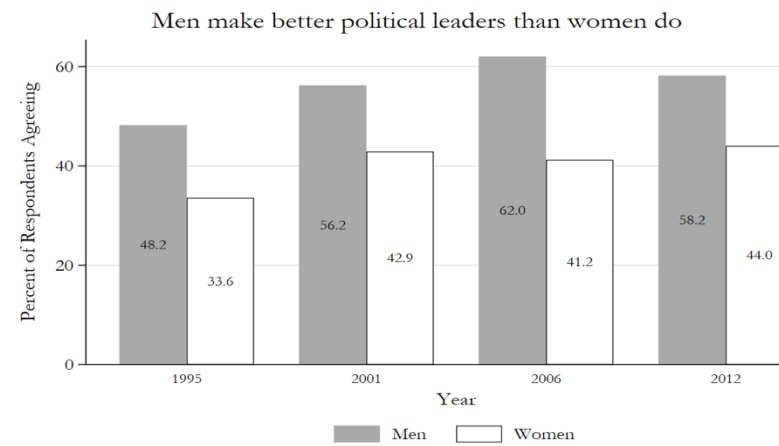
*B. Women's presence in the police*



Sources: Trivedi Center for Political Data at Ashoka University for Figure A (<https://lokhaba.ashoka.edu.in/>, accessed December 2021); Figure B data shared by Sabyasachi Das and Gaurav Sabharwal, originally collected from India's Ministry of Home Affairs website about the Indian Police Service. Notes: Figure B shows the three-year moving average of women's share of new appointments in the Indian Police Service.

**Figure 6: Trends in societal views on women's education and competence**

*A. % who agree that "university is more important for a boy than for a girl" B. % who agree that "men make better political leaders than women do"*



Sources: World Values Survey (WVS). Notes: Values shown are the percentage of men and women who agree or strongly agree with the given statement.

# **Women and the Economy**

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**Chapter for *The Cambridge Economic History of Modern South Asia***

Online appendix

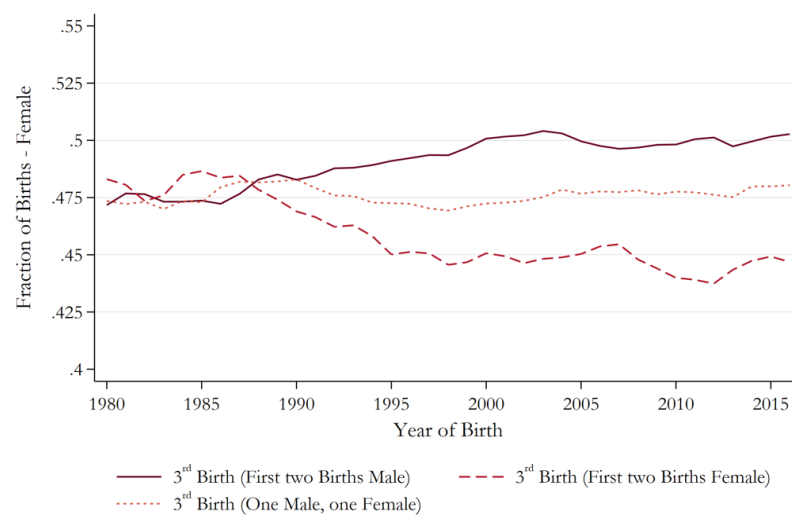


**Figure A1: Trends in India's gender ratio at birth**

*A. Fraction of first births that are female*



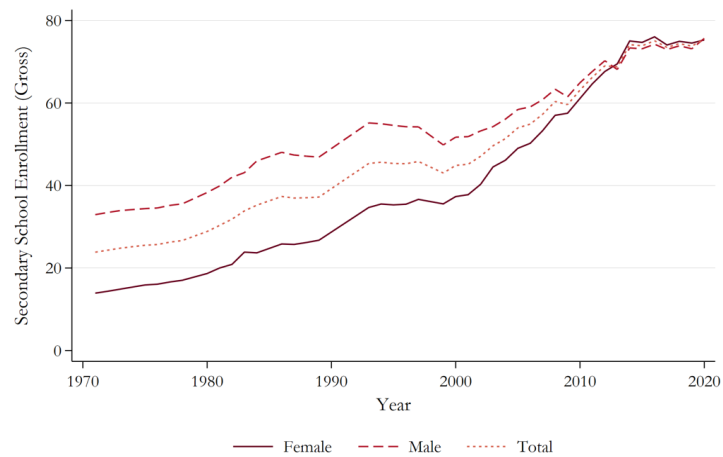
*B. Fraction of third births that are female, by gender mix of first two*



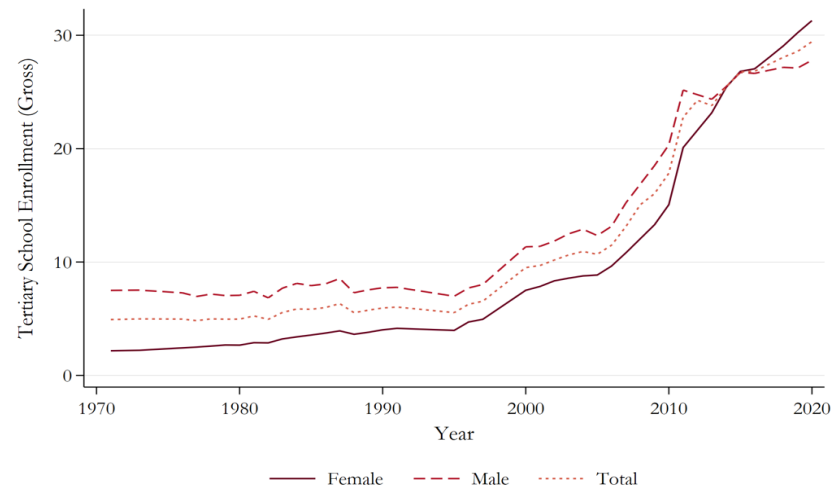
Sources: Authors' calculations based on National Family Health Surveys of 1992-93, 1998-99, 2005-06 and 2015-16.

**Figure A2: Trends in women's education enrolment**

*A. Gross enrollment ratio (secondary education)*



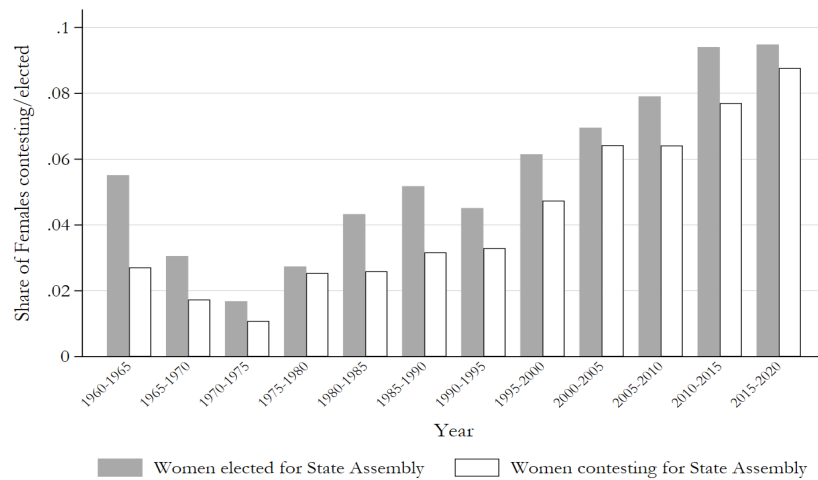
*B. Gross enrollment ratio (tertiary education)*



Sources: World Development Indicators, World Bank. Notes: The gross enrollment ratio for secondary or tertiary education is calculated by dividing the number of students enrolled at that level of education (regardless of age) by the population of the age group which officially corresponds to that level of education.

**Figure A3: Trends in women's representation in governance institutions**

*A. Women's representation in state legislative assemblies*



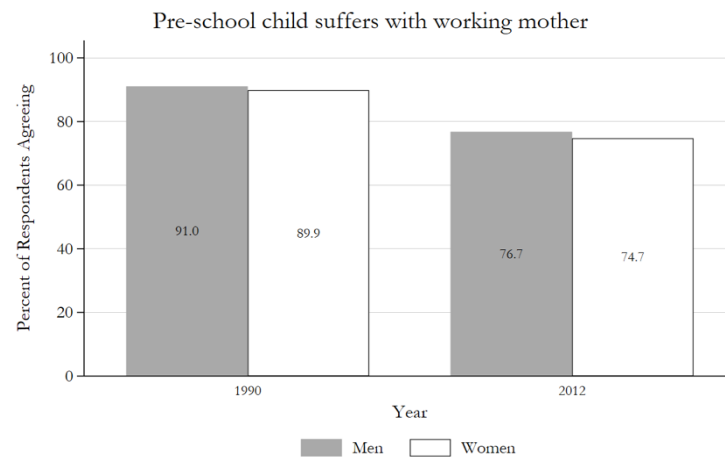
*B. Women's presence in the judiciary*



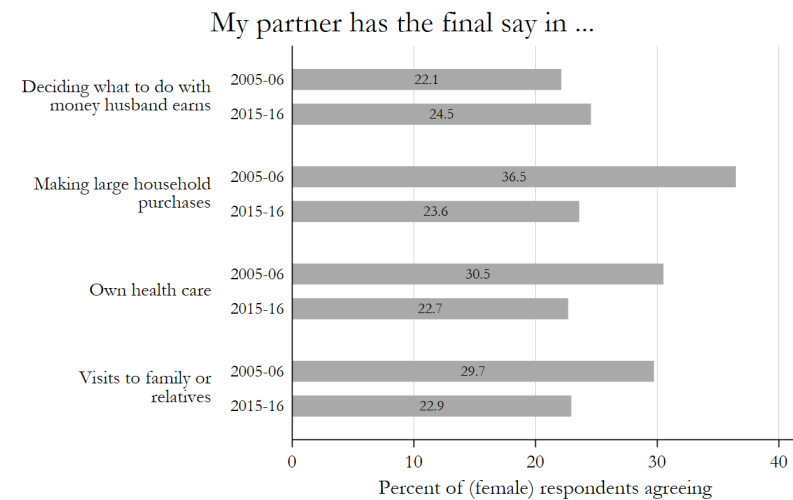
Sources: Trivedi Center for Political Data at Ashoka University for Figure A (<https://lokhaba.ashoka.edu.in/>, accessed December 2021); Ash et al (2021) and DDL Judicial Data Portal for Figure B (<https://www.devdata.org/judicial-data>, accessed January 2022). Notes: Figure B shows three-year moving averages of women's share of new appointments in the lower judicial courts.

**Figure A4: Trends in societal views on women's work, education, competence and autonomy**

*A. % who agree that "pre-school child suffers with a working mother"*



*D. % who say that partner has the final say in decisions*



Sources: World Values Survey (WVS) for Figure A; National Family Health Surveys of 2005-06 and 2015-16 for Figure B. Notes: For Figure A, values shown are the percentage of men and women who agree or strongly agree with the given statement. For Figure B, values are the percentage of women respondents who say that their partner has the final say in the specific decision.