

Intimate Partner Violence and Women's Economic Empowerment Evidence from Indian States

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INTIMATE PARTNER VIOLENCE AND WOMEN'S ECONOMIC EMPOWERMENT EVIDENCE FROM INDIAN STATES*

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Abstract

Domestic violence is a global phenomenon. We study the interplay of determinants of a woman's risk of facing intimate partner violence (IPV) for the case of India—using information from up to 235 thousand female survey respondents and exploiting state-level variation in institutions, law enforcement and attitudes. Unless in paid and formal employment, a woman's economic activity is associated with a higher risk of IPV. However, household and other characteristics, such as higher agency within the household, higher education of the husband, lower social acceptance of IPV, and normalization of reporting incidences of violence counter this association. At the state level, the presence of more female leaders, better reporting infrastructure for victims of IPV, and higher charge-sheeting rates are associated with a lower risk of IPV

JEL Classification: J01, J16, K14, O15.

Key Words: Female employment, labor force participation, intimate partner violence, legal rights, institutions

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Executive Summary

This paper focuses on, arguably, the most complex barrier holding back many women in India and other countries—intimate partner violence. Domestic violence is a global phenomenon. We look at the case of India, in large part because the country's female population represents more than one sixth of the global female population and data are comprehensive and consistent at the national and state levels to study the incidence. We use both micro-level evidence from up to 235 thousand respondents from three waves of the National Family Health Survey as well as macro-level economic and institutional information from Indian states to point to the interplay of microeconomic (individual and family) and socio-economic (state-level) factors that relate to an individual's risk of facing violence by her partner—with a focus on the impact of women's economic empowerment that links closely with better macroeconomic outcomes.

In the past decade, the government has launched several initiatives focusing on women's leadership and empowerment, and a range of laws and initiatives aim to protect women and girls from violence. Notwithstanding notable improvements, wide gender gaps remain, and the incidence of violence against women remains high, with significant costs to individuals, families, and the economy.

The results of this paper highlight the following:

- First, at the individual level, for most types of employment, a woman being employed and earning more than their partner translates into a *higher* risk of intimate partner violence. However, when combined with specific interventions, women's formal and paid employment can *reduce* the individual's risk of intimate partner violence. In particular, empowerment and agency at the household level, higher education of men, lower acceptance of intimate partner violence in the state the woman is residing, and normalization of reporting of violence can turn the relationship between female formal and paid employment and intimate partner violence to one in which employment and lower risk of intimate partner violence go hand in hand.
- Second, a higher share of women in leadership positions at the state-level is associated with a lower risk of violence for the individual living in that state. Existing studies show that the presence of more female leaders change perceptions of women as workers and contributors to the household's income.
- Third, strong institutions, and especially the enforcement of laws, matter. We show that better reporting infrastructure for victims of intimate partner violence and higher charge-sheeting rates at the state-level translate into a lower risk of violence for the individual.

Our key takeaway is that the complexity of the problem requires a multipronged approach to reduce and eliminate domestic violence, including by empowering women more broadly. Such efforts would foster better living conditions for women and girls, while helping India reap its massive economic development potential.

Introduction

"Can we not pledge to get rid of everything in our behavior, culture and everyday life that humiliates and demeans women? Women's pride is going to be a huge asset in fulfilling the dreams of the nation. I see this power and therefore I am insistent on it."—Narendra Modi, Prime Minister. Independence Day Speech, 2022.

This speech is not the first time that the Prime Minister laid out his government's priority on women's empowerment. During his first Independence Day Speech on August 15, 2014, he urged every parent to treat their sons and daughters as equals during their formative years. In the past decade, the government has launched several initiatives focusing on women's leadership and empowerment, and a range of laws and initiatives aim to protect women and girls from violence. Notwithstanding notable improvements, wide gender gaps remain, and the incidence of violence against women remains high, with significant costs to individuals, families, and the economy.

Long-standing Issues, Holding Back Individuals and Society

Gender-based violence puts a heavy toll on the wellbeing and health of the affected individual, her family, society and the economy. In sum: when gender-violence is high, everyone loses.

The individual endures trauma (pain, suffering, disability, death), with possible longer-term psychological impacts (Elsberg and others 2008). Boys and girls whose mothers experience intimate partner violence face a significantly higher risk of death at infancy or before turning five (Asling-Monemi and others 2003). They are also likely to suffer from a range of physical and behavioral issues (Artz and others 2014). For India, Ackerson and Subramanian (2008) highlight that domestic violence increases women's risk of anemia and being underweight, and that it correlates with children's risk of being stunted.

Violence against women also results in substantial macroeconomic and household income losses. Economic growth suffers from less hours worked (absenteeism) and reduced productivity (presenteeism) (Duvvery and others 2013) which impairs earnings for individuals and households (United Nations 2005). A one-percentage point increase in the share of women experiencing violence could reduce economic activity (as measured by nightlights) by 8-9 percentage points (Ouedraogo and Stenzel 2021). In India, each incidence of IPV implies at least five paid days of work lost (UN Women 2016), while a study for Nagpur, a city in the state of Maharashtra, found that the average household loses the equivalent of almost two weeks' income per occurrence (ICRW 2000; World Bank 2009). Longer-term economic growth suffers from lower human capital formation and diversion of investment from physical capital to health, judicial and social services. On the other hand, if labor force participation gaps in India narrowed to the average of countries in the Asia and Pacific region, this could yield GDP gains of more than 25 percent (estimate based on Ostry and others (2018)).

Significant Government Action

The Government of India has taken several initiatives to reduce gender-based violence and, at the same time, implemented policies to empower women economically and socially. The current Prime Minister has made reducing gender disparities a national priority and has championed the cause on a sustained basis for the past decade:

- *Measures to protect women from violence* (UN Women, Global Database on Violence against Women): The Protection of Women Against Domestic Violence Act (2005) aims to shield women from different forms of domestic abuse, including physical, sexual and emotional harm. The prohibition of Child Marriage Act (2006) protects minors

from forced marriages that often result in higher rates of domestic violence. The Criminal Law Amendment Act (2013) mandates all hospitals to provide free medical treatment to victims of rape and acid attack, while the 2018 amendment increases penalties for offenses of rape and mandates completion of investigation and trials within 2 months each. Women helplines seek to provide immediate and emergency response to women affected by violence. One-stop centers aim to provide integrated support by bundling services (emergency response, medical support, psycho-social assistance and legal counselling, shelter) (Bhartiya Stree Shakti 2017). The government created the [Central Victim Compensation Fund](#) with a one-time grant in 2016.

- *Schemes to empower women economically and socially:* The [Stand-Up India Scheme \(2016\)](#) promotes female entrepreneurship by assisting in starting greenfield enterprises in select sectors. The [Pradhan Mantra Ujjwala Yojana \(2016\)](#) scheme aims to address safety and health concerns by providing clean cooking fuel to underprivileged households, while [POSHAN \(the Prime Minister's Overarching Scheme for Holistic Nourishment\) Abhiyaan \(2018\)](#) puts emphasis on women's nutritional status. [Vigyan Jyoti \(2020\)](#) aims to boost girls' representation in STEM.

Yet, High Levels of Intimate Partner Violence and Low Female Labor Force Participation Persist

Despite these initiatives, the incidence of Intimate Partner Violence (IPV)¹ in India remains high, while women's participation in paid economic activity is low compared to other countries in the Asia and Pacific region. According to the most recent National Family Health Survey (2019-21), approximately 1 in 3 women in India experienced physical, sexual, or emotional IPV. This rate is higher than in many other countries in the Asian and Pacific region and worldwide. At the same time, India's rate of female labor force participation is lower than in most countries.²

With both high levels of violence, and low female labor force participation, India is losing out on significant development and inclusive growth opportunities, raising two key questions: What is keeping the rate of IPV up? And how does this issue relate to women's economic empowerment, including currently low levels of labor market activity?

To answer these questions, we add to a substantial literature on the drivers of IPV to study the joint influence of individual, family, societal and economic factors on IPV incidence. To this end, we rely on the socio-ecological model (Bronfenbrenner 1978; Bronfenbrenner 1987; Heise 1998) to disentangle individual, family, community and societal factors that are correlating with the risk of IPV for the individual, and the incidence of IPV at the state level. We contribute to this literature by exploiting state-level level variation in institutions, policies and attitudes, such as by capturing the availability of and trust in reporting infrastructure and enforcement of charges against crimes, state-level female leadership and attitudes towards violence—we thus label these societal-augmented factors as “socio-economic” factors to distinguish them from factors that are based on individual and family characteristics for the remainder of the paper. We do not claim causality.

¹ For the purpose of this paper, we use the terms domestic violence and intimate partner violence interchangeably.

² According to World Bank Gender Statistics, for every 10 men, about 4 women work. However, discussions about measurement and quantifying the share of women in the labor force are ongoing.

Tackle IPV Holistically, while Empowering Women Economically

By including both individual and the aggregate socio-economic indicators, our findings contribute to the literature by pointing to the interplay of microeconomic (individual and family) and socio-economic (state-level) factors that relate to an individual's risk of facing violence.

- At the individual level, women's employment and higher wages relative to her partner *increase* her risk of facing IPV. Indeed, while employment can improve a woman's bargaining power and mitigate the risk of violence (Farmer and Tiefenthaler 1997; Tauchen, Witte, and Long 1991), this result is in line with existing studies for India that show that the rate of violence was higher for working women (Dalal 2011), and for those who were more educated and in better employment than their husband (Burton and others 2000).
- We add to this evidence base by showing that the impact of women's employment on IPV depends on multiple factors and characteristics at both the household and state level. Combined with specific interventions—empowerment and agency at the household level, lower acceptance rates of IPV, higher male education, and normalization of reporting of violence—women's formal and paid employment can *reduce* the individual's risk of IPV.
- In addition, we show that, at the state-level, women's economic empowerment—a higher share of female employers—is associated with lower rates of violence. This is likely as, with higher female representation, perceptions of women as workers and contributors to household's income change or women have better employment opportunities outside the household, raising their potential wages (Pollak 2005; Munyo and Rossi 2015).
- Finally, institutions rule, and enforcement matters. We show that better reporting infrastructure for victims of IPV and higher charge-sheeting rates at the state-level translate into a lower risk of IPV for the individual, and lower incidences of IPV at the state-level.

These findings call for an integrated approach to tackle barriers to women's economic empowerment, while, at the same time, implementing measures to protect individuals from violence through a robust reporting infrastructure and strong enforcement of charges. Indeed, as we jointly examine the complex drivers of violence at the individual and state-wise socio-economic levels, we argue that a multipronged approach that involves multiple stakeholders is needed.

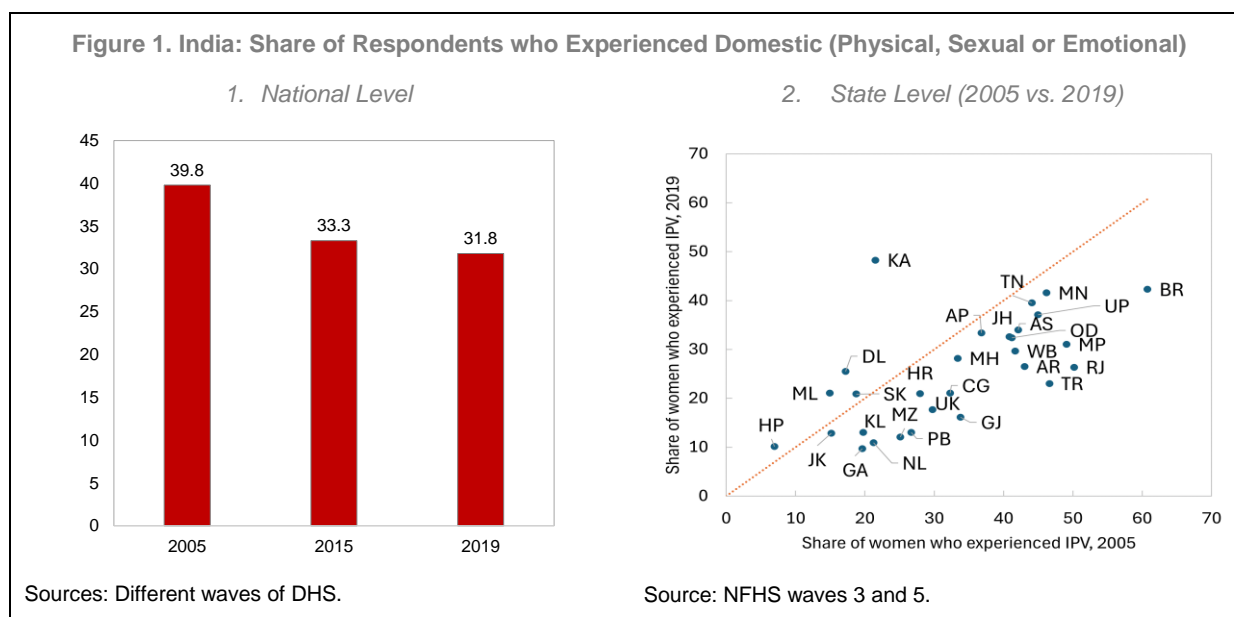
The next section provides an overview of the incidence of IPV in India, followed by a presentation of the stylized facts, drawing on the existing literature and the ecological model of health. The subsequent section discusses the results from individual-level and state-level regressions, followed by an overview of government initiatives to promote women's economic and social empowerment, and measures to address IPV. The final section summarizes our study and discusses policy options.

Incidence of Intimate Partner Violence

The India-based National Family Health Survey (NFHS) provides a comprehensive overview of the state of IPV in India. The survey is representative both at the national and state levels. Its domestic violence module captures ever-married women aged 15 to 49 and includes detailed questions on the incidence of violence, attitudes towards violence, reporting of violence, and partner and household characteristics. We use the three latest NFHS waves: 2005-06 (NFHS-3, 2007), 2015-16 (NFHS-4, 2017) and 2019-21 (NFHS-5, 2022) to capture more than 235 thousand ever-married women.³

³ The three waves cover 83,703 (2005-06), 79,729 (2015-16), and 72,320 (2019-2021) ever-married women (age 15-49).

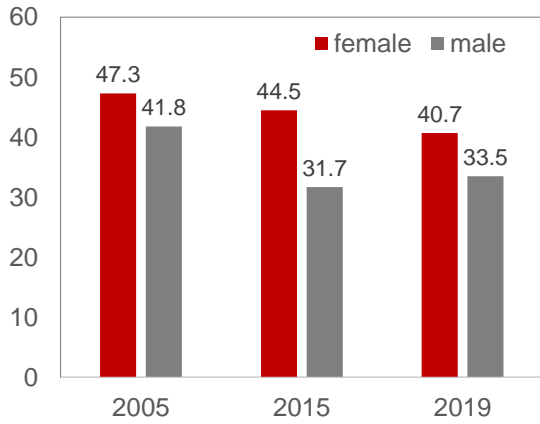
According to these data, the incidence of domestic violence is high and declining at a slow rate in India, and there are large variations across states (Figure 1.1). The lifetime IPV incidence in India was 31.8 percent in 2019-21, down only by 1.5 percentage points compared to 2015. The incidence of physical violence declined from 29.8 percent in 2015-16 to 28.2 in 2019-21, the incidence of sexual violence decreased from 7 percent in 2015-16 to 6.1 percent in 2019-21. On the other hand, the incidence of emotional violence increased (+0.2 ppt) to 14 percent in 2019-21. While these rates are high, these averages also mask significant variation of rates across states (Figure 1.2): For instance, rates are lowest in Goa, Himachal Pradesh, and Nagaland—where the incidence is around 10 percent—and highest in Karnataka, Bihar, and Manipur (up to 50 percent).



The share of respondents who justify wife beating is substantial, with higher acceptance rates among women, while reporting rates of domestic violence are low.

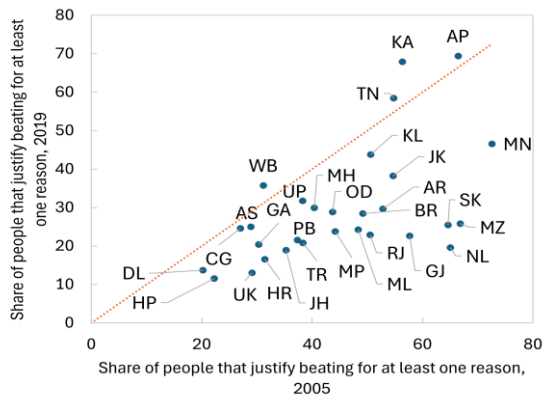
- The share of women who justify wife-beating for any reason has been consistently higher than the share of men (Figure 2). The acceptance by women in the latest survey, at 41 percent, is high by any standards. While the female share has decreased, the share of men who justified wife-beating rose (+2 pts) between 2015 and 2019. There is significant variation of acceptance rates across states, which are positively correlated with higher incidences of IPV in these states (Figure 3): In Andhra Pradesh, for instance, as many as 80 percent of women surveyed by NFHS in 2019-21 justified wife-beating for at least one reason, while in Tamil Nadu and Telangana, the figure was around 75 percent. In Uttar Pradesh it was around 36 percent. In Himachal Pradesh and Delhi, this share was below 15 percent.
- The high incidence of IPV contrasts sharply with the low percentage of women who reported such violence or sought help from any source—official or unofficial (Figure 4). Reporting of IPV to anyone is generally low, declining between 2005 and 2019 (Figure 4). Only a small share of women who experienced IPV sought help from unofficial sources (for instance, friends, family, neighbors). Even fewer women who were victims of IPV sought help from official sources (police, doctors, lawyers, social services)—only one in 100 did—though rates vary somewhat across states (Figure 5). In Manipur, for example, where the incidence of IPV is 40 percent, only 3 percent of victims sought help from any source, whether official or unofficial. In contrast, in states like Punjab and Goa, where IPV rates are lower at around 10-13 percent, more than 30 percent of victims sought help.

Figure 2. India: Share of Population Justifying Wife-Beating, 2005-2019
(Percent of Respondents)



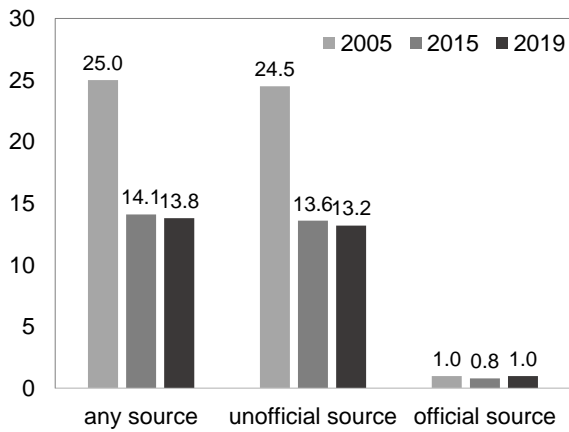
Source: NFHS, waves 3-5).

Figure 3. Indian States: Share of Population Justifying Wife-Beating, 2005 vs 2019
(Percent of Respondents)



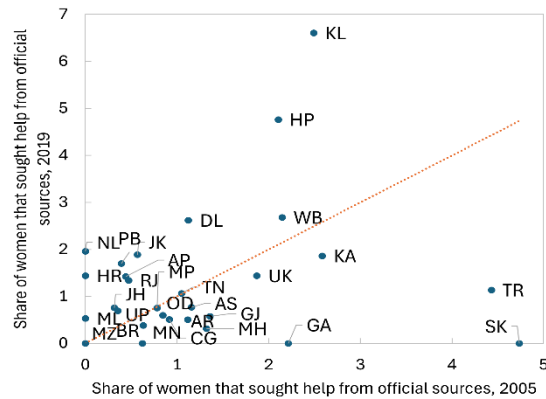
Source: NFHS, wave 5.

Figure 4. India: Share of Women who Sought Help from Different Sources, 2005-2019
(Percent of Respondents)



Source: NFHS, waves 3-5.

Figure 5. Indian States: Help-Seeking from Official Sources, 2005 vs. 2019
(Percent of Respondents)



Source: NFHS, waves 3 and 5.

Drivers of Intimate Partner Violence: Literature and Stylized Facts

The Ecological Model of Health

Domestic violence is a result of multiple factors at the individual, familial, community, and socio-economic levels that work simultaneously. The socio-ecological model of health formalizes this approach through concentric circles representing different systems, with the individual placed in the center (Bronfenbrenner 1977). The microsystem is closest to the individual. It represents the characteristics that the individual brings to the system (age, education attainment, employment status, personal history) and includes the interactions and relationships in the immediate surroundings. The mesosystem includes major interactions (with intimate partners, family, peers) with the individual at the center. The exosystem does not contain the individual—it exerts interactive forces on the individual via community contexts and social networks. The macrosystem refers to the overarching institutional patterns of the culture or subculture, that is, economic, social, legal, and political systems that contextualize interactions observed within the micro-, meso-, and exosystem (Bronfenbrenner 1977; Bronfenbrenner 1986). Heise (1998) adapted the socio-ecological model to study domestic violence.

In this paper, the microsystem refers to individual-level factors, the mesosystem refers to intimate partner characteristics, the exosystem refers to household (community) characteristics—captured through microeconomic data. The socio-economic system refers to state-level characteristics and socio-economic factors that we observe at the state-level. In the following, we highlight some of the channels reported in the literature and first associations of IPV with different indicators according to the ecological model (see Annex I for a description of the data; and Annex II for the state-level regression results).

Individual and Intimate Partner Characteristics

A large body of the literature has studied individual factors that are associated with intimate partner violence. For instance, studies have shown that lower educational levels, a history of violence within the family, and alcohol consumption are reliable predictors of intimate partner violence, including in India. We confirm these findings, including the strong negative relationship between female and male education and IPV (Figure 6). Coefficients reported in Figures 6-10 take into account time fixed effects.



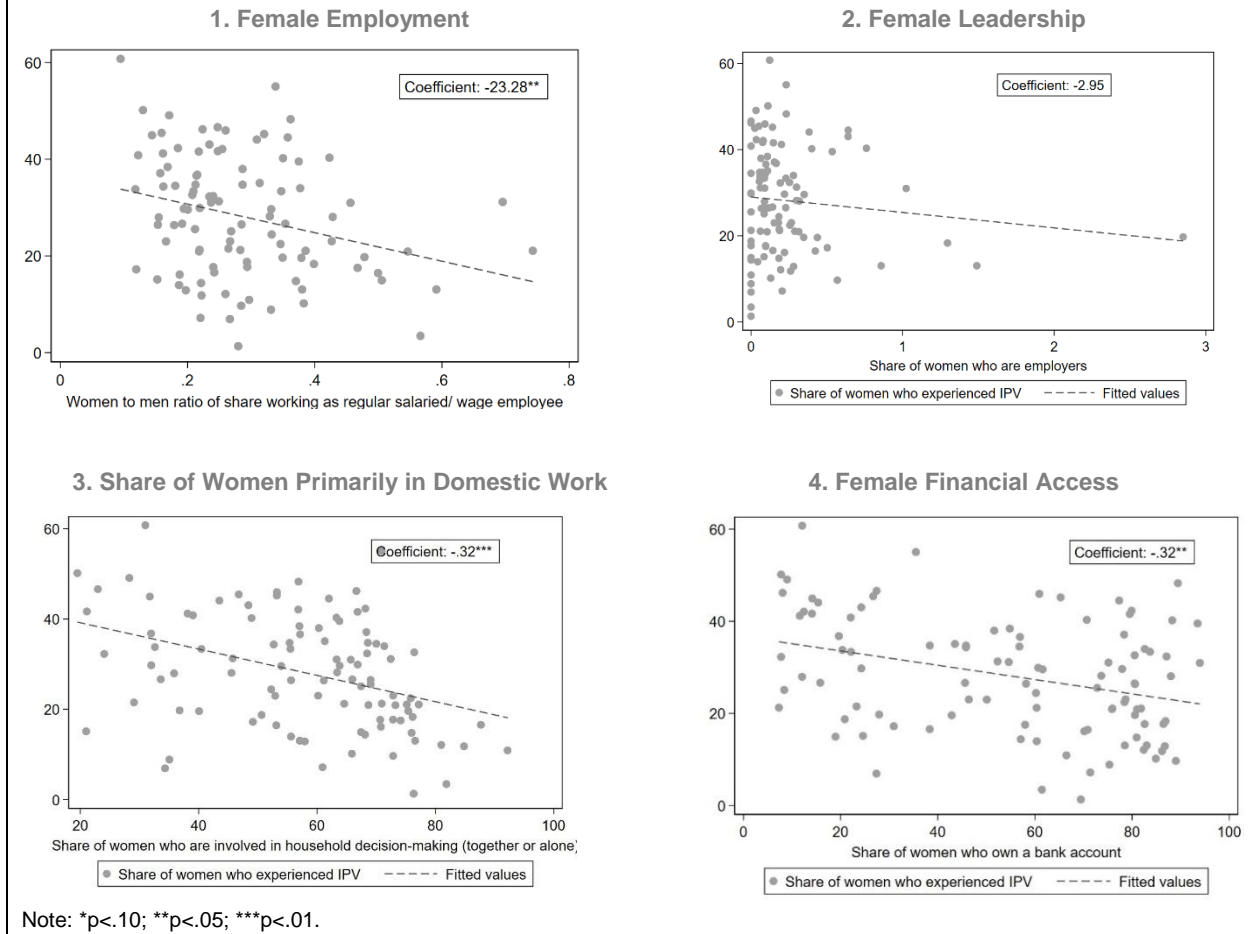
However, the literature has not settled on the question whether women’s economic empowerment—such as employment or income relative to the partner—is associated with lower or higher rates of IPV.

- On one hand, women’s employment status and access to finance appear to be key channels to improve women’s bargaining power (Farmer and Tiefenthaler 1997; Tauchen, Witte, and Long 1991). Logically, if intimate partner violence is an outcome of strategic interactions between intimate partners within a non-cooperative family unit, where the wife can use the “threat” of leaving as a bargaining tool, women’s income and other financial support increase the “threat point” (Farmer and Tiefenthaler 1997) thus generally decreasing the incidence of IPV (Tauchen, Witte, and Long 1991). Bhattacharyya and others (2011), in examining the relationship for North Indian Villages and treating women’s work status as endogenous, finds that paid work and house ownership reduced violence, and Panda and Agarwal (2005) relate higher ownership of immovable property by women to lower risks of marital violence.
- Yet, for a sample of ever-married Indian women, Dalal (2011) finds that, on average, the rate of violence was higher for working women. For seven countries⁴, working women were equally or more likely to justify wife beating compared to nonworking women (Rani and Bonu 2009)—highlighting this is a complex issue that may bely simple characterization. A multi-site household survey in seven different sites in India⁵ found that both physical and psychological violence were more frequent when the female respondent was more educated and had a better type of employment than her husband (Burton and others 2000).

⁴ Armenia, Bangladesh, Cambodia, India, Kazakhstan, Nepal, and Turkey.

⁵ Bhopal, Chennai, Delhi, Lucknow, Nagpur, Thiruvananthapuram, and Vellore.

Figure 7. Indian States: Intimate Partner Violence and Measures of Economic Empowerment

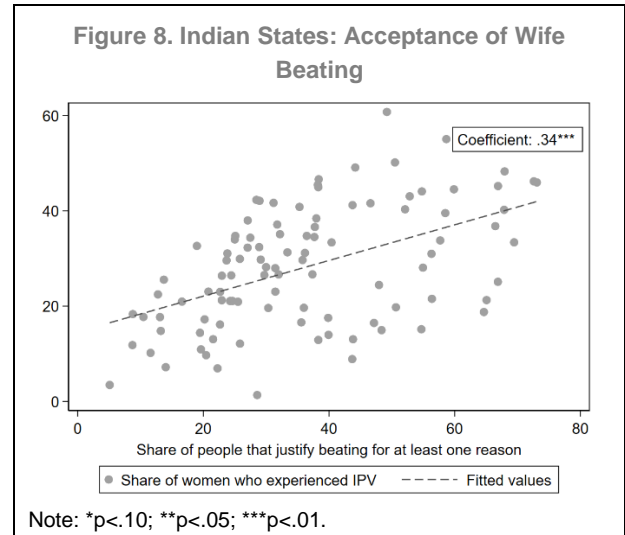


Our study contributes to this literature by examining different dimensions of women’s economic empowerment both at the individual and macro-level, which in our study, relates to the state-wide level (Figure 7). At the state level, a higher ratio of women to men who are working as regular salaried employees is significantly associated with lower IPV (Figure 7.1). Yet, as we will show in the empirical section, for the individual, controlling of other factors, the data suggest that women who are not working experience less violence, on average, relative to employed women. A higher share of female employers correlates with lower incidences of violence at the state-level (Figure 7.2).⁶ Attitudes towards women’s economic empowerment—proxied by women’s inclusion in household decision making—relate negatively with IPV (Figure 7.3). At the state level, higher rates of female financial inclusion are associated with lower incidences of violence (Figure 7.4).

⁶ The negative correlation remains even after excluding some outliers—defined as states where women’s representation in employer roles exceeds 0.6 percent. However, the correlation is weak because many states have no women in employer positions.

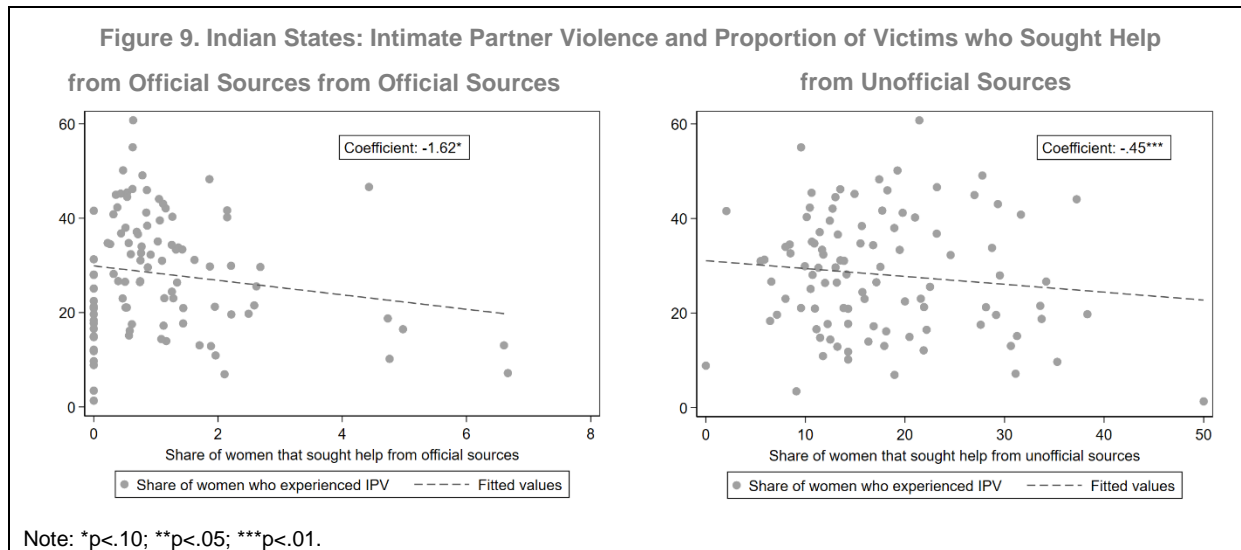
Community Factors

Overarching community factors influence how the individual's and her partner's or household characteristics interact with each other and may influence the risk of intimate partner violence. For instance, Niaz (2003) finds that rigid and patriarchal attitudes that devalue the role of women deplete women's bargaining and exacerbate the risk of violence (Niaz 2003). Solotaroff and Pande (2014) argue that low social status, lack of power, and other related social and economic challenges exposes most girls and women in South Asia to some form of violence throughout their lives. In our study, we focus on acceptance towards wife beating to capture these factors and find that higher acceptance rates related to a higher incidence of violence (Figure 8).



Socio-Economic (State-Level) Factors

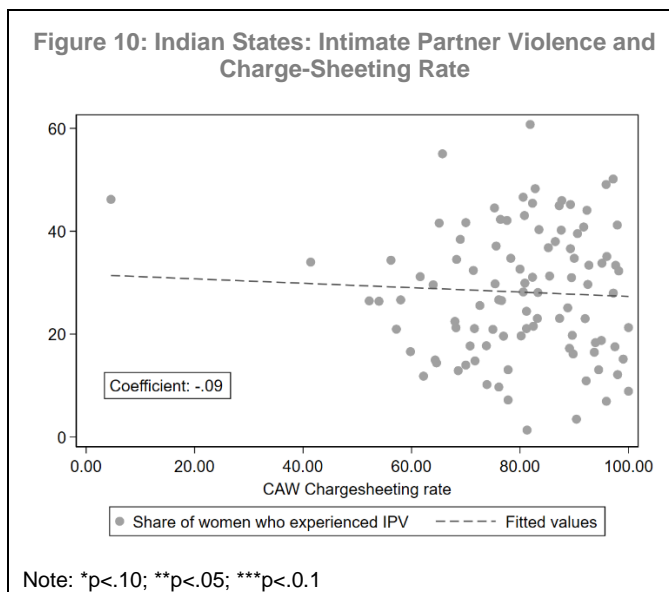
In addition to individual and community factors, reporting infrastructure at the state level, strong state policies, laws, and societal perception of domestic violence matter (Dandona and others 2022). Iyanda and others (2019), for 12 African countries, find legal protection against violence to be negatively associated with the incidence of gender-based violence. However, the general socio-economic environment, the power to influence the introduction, implementation, and enforcement of such laws are critical factors. Here, countries or states with a more positive view of women's empowerment are possibly more likely to have such laws in place and properly enforce them. Individual factors such as illiteracy, financial dependence, lack of agency, and subordination, and institutional factors—for instance, the process of reporting violence against women, gaps and ambiguities in the law, weak law enforcement, and corruption—work both individually and jointly to prevent victims of violence from seeking justice (Bhartiya Stree Shakti 2017; Dandona and others 2022).



In our study, we find a strong and significant negative association between the state-level share of women who sought help from any source and the average incidence of IPV within the state (Figure 9). We also find that seeking help from official sources (police officers, lawyers, social services) is a stronger deterrent of violence than seeking help from friends and family.

In addition, enforcement is critical (Figure 10). We find that states with a higher charge-sheeting rate—the ratio of cases with charges framed against the accused as a percentage of total true cases reported—for crimes against women have lower IPV incidence. Interestingly, we do not yet see a similar correlation between IPV incidence and conviction rate, possibly because the conviction rates are very low and take a long time to materialize.

In general, influence of macroeconomic factors on labor market conditions, such as employment status and wages, have been found to be driving forces of IPV incidence (Munyo and Rossi 2015; Bhalotra and others 2018).



Empirical Analysis: What is Driving Intimate Partner Violence?

Methodology

The previous section gave a first overview of possible drivers of IPV as identified in the literature in general and for India in particular. In this section, we focus on all of these factors in relation to each other.

At the individual level, we cover women's characteristics including age, education, employment type, paid employment within the formal sector (a dummy variable set to 1 for women who are working in the professional, technical, managerial, clerical, or sales sectors and are paid in cash only), familial history of violence, and alcohol consumption. Square of women's age captures the non-linearity in the relationship between risk of IPV and age. Education level includes the categories "no education", "primary education", "secondary education" and "higher education". Employment type divides individuals into groups based on employment status and type, with unemployment as the base in the regression, and employment categories being: (a) professional, technical, managerial, clerical, or sales roles, (b) services (household or domestic), or (c) agriculture or (skilled and unskilled) manual labor. For familial history of violence, a yes/no dummy captures the question "Did your father ever beat your mother?". Finally, alcohol consumption indicates whether the respondent drinks alcohol.

At the partner relationship level, the indicators capture the partner's characteristics, both independently, and in relation to the respondent characteristics, including indicators that could influence the relationship between the respondent and her partner. Therefore, this level includes three categories of indicators: (1) partner's individual characteristics (education, employment type, and alcohol consumption), (2) respondent's characteristics in relation to partner characteristics (gap between respondent's and partner's age and wages), and (3) individual characteristics that may influence the respondent-

partner dynamic within the household (respondent's participation in household decision-making and respondent's access to finance). To get an indication of the gap between the respondent's and partner's wages, we include a dummy indicator which is equal to 1 if the respondent is currently working and earns more than her partner. Respondent's participation in household decision-making is captured by a dummy which is equal to 1 if the respondent is involved in all aspects of household decision-making, either by herself, or jointly with her partner. Access to finance indicates whether the respondent has access to an account in a bank or a financial institution, may influence women's bargaining power within the relationship, thus affecting her interactions with her partner. We also include a dummy to capture the partner's alcohol consumption.

At the household or community level, we include characteristics which describe the familial environment around the respondent situated outside of her relationship with her partner but have some level of influence on the interactions within the respondent-partner relationship. These characteristics include number of children aged 5 and under in the household, number of household members, whether the head of the household is a woman, whether the household is situated within a rural area, the wealth status of the household, religion, and caste. The wealth status captures five groups based on which quintile the household's "assets and factors score" falls into—based on the household's ownership of selected assets, such as televisions and bicycles; materials used for housing construction; and types of water access and sanitation facilities. The five groups are "poorest", "poorer", "middle", "richer", and "richest". Respondent's religion and caste are the same as the household's religion and caste for most of the respondents. Religion is divided into seven categories: Hindu, Muslim, Christian, Sikh, Buddhist / Neo- Buddhist, Jain, and other or none of these. Caste is divided into four groups: scheduled caste/scheduled tribe (SC/ST), other backward classes (OBC), no caste or tribe, and other.

The socio-economic state-level factors include the overarching social, cultural, economic, or political factors within which individuals, relationships, and households exist and interact with each other. These include the state averages for the share of people who justify intimate partner violence, the share of domestic violence victims who sought help from unofficial sources (including friends, family, co-workers, etc.), the share of domestic violence victims who sought help from official sources (including police, lawyers, doctors, or NGOs), the state-level charge-sheeting rate for crimes against women, and the share of women within the state who are employers (thus capturing women's leadership within the workforce).

We use weighted logistic regressions to look at the joint impact of these indicators, with the domestic violence dummy as the main dependent variable. Probability weights are based on the two-stage sampling used by NFHS to get nationally representative results. We run the following pooled logit regression for an individual i who lives in household h in state s (see Annex III for a description of all data labels):

$$\begin{aligned}
 Y_{i,h,s} = & \alpha + \beta_1 age_i + \beta_2 age_i^2 + \beta_3 primary_i + \beta_4 secondary_i + \beta_5 higher_i + \beta_6 professional_i + \beta_7 services_i + \beta_8 agriculture_i \\
 & + \beta_9 formal_i + \beta_{10} history_i + \beta_{11} alcohol_i + \beta_{12} agedifference_i + \beta_{13} hprimary_i + \beta_{14} hsecondary_i \\
 & + \beta_{15} hhigher_i + \beta_{16} hprofessional_i + \beta_{17} hservices_i + \beta_{18} hagriculture_i + \beta_{19} halcohol_i + \beta_{20} earnmore_i \\
 & + \beta_{21} bank_i + \beta_{22} decision_i \\
 & + \beta_{23} hindu_i + \beta_{24} muslim_i + \beta_{25} christian_i + \beta_{26} sikh_i + \beta_{27} buddhist_i + \beta_{28} jain_i + \beta_{29} scst_i + \beta_{30} obc_i \\
 & + \beta_{31} nocaste_i + \beta_{32} children_h + \beta_{33} members_h + \beta_{34} hhgender_h + \beta_{35} rural_h + \beta_{36} poorer_h + \beta_{37} middle_h \\
 & + \beta_{38} richer_h + \beta_{39} richest_h + \beta_{40} justdv_s + \beta_{41} unofficialhelp_s + \beta_{42} officialhelp_s \\
 & + \beta_{43} CAWchargesheeting_s + \beta_{44} employers_s + \sigma_s + \theta_t + \epsilon_i
 \end{aligned}$$

The macro or state fixed effects are represented by σ_s , while θ_t refers to the year fixed effects for the years 2015-16 and 2019-21 (taking 2005-06 as the base). Y is the log-odds ratio of the dummy indicating whether a respondent ever

experienced a specific type of violence. The log-odds ratio is the odds ratio transformed by the natural logarithm function. The odds ratio is defined as the ratio of the probability of domestic violence (dummy codes as 1) to the probability no domestic violence (dummy coded as 0). Therefore, the log-odds ratio Y is calculated as follows:

$$Y = \ln\left(\frac{\Pr(\text{domestic violence})}{1 - \Pr(\text{domestic violence})}\right)$$

Where $\Pr(\text{domestic violence})$ refers to the probability, ranging from 0 to 1, that a respondent experienced domestic (or physical, emotional, or sexual) violence.

Baseline Results

Tables 1-3 present the stylized outcomes from the regressions that use both the three waves of NFHS data to capture individual and intimate partner characteristics through micro data and community and socio-economic characteristics through both micro and state-level data. See Annex I for a detailed description of all data sources and definition of variables. Tables 1-3 are sub-sections of one single for each type of violence: We report parts of the regression in each subsection to make the results more easily digestible, but each table includes the full set of individual and state covariates, religion, and caste, as well as time and state fixed effects. Annex IV provides the detailed regression results for IPV as well as individual types of violence (physical, sexual, emotional).

Micro-Level Individual, Partner and Household Characteristics

There is a strong association of individual-level characteristics with IPV (Table 1). The relationship between age of respondent and IPV incidence is non-linear. The risk of IPV peaks at the when the respondent is in her 30s and decreases with age after that.⁷ The respondent's education level is consistently associated with lower IPV risk, regardless of type of IPV. The risk of physical and sexual IPV significantly decreases if the respondent has attained at least secondary level of education, emotional violence is significantly lower only for the respondents with higher education. Family history of violence is associated with higher rates of IPV. One explanation is that being exposed to IPV within their own family could normalize IPV for respondents and make it harder for them to identify abusive relationships, and consequently leave them, in the future.

The relationship between IPV and the respondent's economic empowerment is complex (Table 1 and 2). At the individual level, a women's work and higher income related to her intimate partner are associated with a higher risk of IPV. Working respondents face a significantly higher risk of IPV, but the risk of IPV differs by employment type. Working in agriculture or manual labor is associated with a higher risk of IPV and, compared to other occupation categories, the association with all types of violence is the strongest. Compared to a situation in which the respondent is not working, working in professional, clerical, managerial, technical, or sales roles is associated with higher risk of sexual and emotional violence. In addition, IPV is significantly higher if the respondent earns more than the husband (Table 2). Other dimensions of economic and personal empowerment, however, are associated with a lower risk of IPV. For instance, women's involvement in household decision making is associated with lower risk of all types of IPV, and the risk of (physical) IPV is lower in female-headed households.

⁷ Robustness checks reveal that, while, on average, respondents are at lower risk of IPV if the age difference between them and their partner is large, this relationship is not significant or consistent for all types of violence.

Table 1. India: Pooled (Weighted) Regressions by Type of IPV—Respondent Characteristics

	Intimate Partner Violence (all)	Physical Violence	Sexual Violence	Emotional Violence
Current age	***	***	***	***
Current age (squared)	***	***	***	***
Highest educational level: No education (base)				
Highest educational level: Primary				
Highest educational level: Secondary	***	***	**	
Highest educational level: Higher	***	***	***	***
Occupation: Not working (base)				
Occupation: Professional / Technical / Managerial / Clerical / Sales			**	*
Occupation: Services (household and domestic)	***	***	**	***
Occupation: Agricultural or Manual (skilled and unskilled)	***	***	***	***
Respondent is working in the formal sector and is paid in cash only			*	
Respondent's father beat her mother	***	***	***	***
Respondent drinks alcohol	***	***	***	***
Respondent has an account in a bank or other financial institution				
Respondent involved in household decision-making (together or alone)	***	***	***	***

Note: *p<.10; **p<.05; ***p<.01. Results based on regression that also includes covariates in Tables 2 and 3, and dummies to capture religion, cast, and state and time fixed effects.

The partner's education and employment status are significant correlates with IPV. In particular, IPV is lower if the respondent's partner has attained at least secondary education, or, in the case of sexual violence, when he has attained higher level of education. IPV is lower when the intimate partner is employed, though with some variation in significance depending on the type of employment. The IPV risk is consistently higher if the intimate partner, or the respondent herself drinks alcohol, suggesting exacerbating effects that risk-taking behavior of both the respondent and her partner can have on violence.

Household structure and dynamics significantly influence risk of IPV. The incidence of IPV significantly increase with the number of children aged 5 and under in the household, but women living in larger households are less likely to experience IPV. The higher the household's wealth, the lower the risk of each type of violence.

Table 2. India: Pooled (Weighted) Regressions by Type of IPV—Intimate Partner and Family Characteristics

1. Intimate Partner Characteristics

	Intimate Partner Violence (all)	Physical Violence	Sexual Violence	Emotional Violence
Age difference between partner and respondent				
Partner's highest educational level: No education (base)				
Partner's highest educational level: Primary				
Partner's highest educational level: Secondary	***	***		***
Partner's highest educational level: Higher	***	***	***	***
Partner's occupation: Not working (base)				
Partner's occupation: Professional / Technical / Managerial / Clerical / Sales				
Partner's occupation: Services (household and domestic)	***	*	*	*
Partner's occupation: Agricultural or Manual (skilled and unskilled)			*	
Partner drinks alcohol	***	***	***	***
Respondent earns more than her partner	***	***	***	***

2. Household Characteristics

	Intimate Partner Violence (all)	Physical Violence	Sexual Violence	Emotional Violence
Number of children aged 5 and under in household	***	***	***	***
Number of household members	***	***		***
Household head is female		*		
Rural residence	***	***		*
Wealth Group: Poorest (base)				
Wealth Group: Poorer				
Wealth Group: Middle	***	***	**	***
Wealth Group: Richer	***	***	***	***
Wealth Group: Richest	***	***	***	***

Note: *p<.10; **p<.05; ***p<.01. Results based on regression that also includes covariates in Tables 1 and 3, as well as a dummies to capture religion, cast, and state and time fixed effects.

State-Level Socio-Economic Factors

Attitudes towards IPV appear to perpetuate violence (Table 3). Taking into account all individual and household factors, we find that women living in states where a larger share of the population justifies wife beating for at least one reason, are at a significantly higher risk of IPV. This finding is consistent for all types of violence. In addition, higher reporting rates of violence to unofficial sources, such as friends and family at the state-level—a proxy on whether attitudes are towards sharing of incidences—are significantly associated with a lower risk of sexual violence at the individual level.

Institutions and their enforcement matter. A higher share of victims who report to official sources in a state, such as the police, medical professionals, and social services—a proxy of availability of and trust in reporting infrastructure—is associated with a significantly lower IPV risk for the individual. A higher charge-sheeting rate within the state goes hand in hand with lower physical, sexual, and overall violence but a somewhat higher level of emotional violence. While higher reporting to official sources within the state could empower women by normalizing speaking out against IPV, reporting to the police and starting an investigation against their partner could lead to emotional backlash for the individual.

Finally, more female leadership goes hand in hand with lower risk of IPV. Women living in states where the share of women who are employers is higher are less likely to be at risk of physical (and overall) IPV. This may be because seeing women being economically active may also contribute to changing attitudes towards women working, changing household dynamics.

Table 3. Pooled (weighted) Regressions by Type of IPV—Community and Socio-Economic Factors

	Intimate Partner Violence (all)	Physical Violence	Sexual Violence	Emotional Violence
Share of people that justify beating for at least one reason	***	***	***	***
Share of women that sought help from unofficial sources			***	
Share of women that sought help from official sources	***	***	***	***
CAW Chargesheeting rate	***	**	***	**
Share of women who are employers	***	***		

Note: *p<.10; **p<.05; ***p<.01.

Results based on regression that also includes covariates in Tables 1 and 3, as well as a dummies to capture religion, cast, and state and time fixed effects.

When does Formal Paid Employment Mitigate IPV?

The previous sub-section highlighted the ambiguous results of different dimensions of women's economic empowerment, with employment or earning more than the partner being associated with higher levels of IPV, but involvement in household decision making associated with lower incidences of IPV. This triggers the question: When does female formal⁸ paid employment decrease the risk of IPV for an individual in India?

To answer the question, we define female paid formal employment as having a job in a (generally) formal sector (for example, in a professional, technical, or managerial position) and getting paid in cash only for it—a dummy which is equal to 1 if the respondent is working in a professional, technical, managerial, clerical, or sales position and getting paid in cash only. This definition accounts for both the type of employment that a respondent has, and whether the respondent is getting paid for her work in cash. We then present the marginal effects of being in formal paid employment, conditional on different individual and environmental factors.

We run the following pooled logit regression:

$$Y = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 (\text{formal} * Z) + \theta + \epsilon$$

where Y is the log-odds ratio of the dummy indicating whether a respondent ever experienced a specific type of violence, and X_1 , X_2 , X_3 , and X_4 are the individual, relationship, household, and societal factors respectively. The indicator *formal* refers to the female formal paid employment dummy, and the term *formal * Z* gives the interaction between formal paid employment and four individual, partner and state-level factors:⁹

- At the individual and family level, we test interactions of female formal paid employment with (1) the respondent's involvement in decision-making within the household, and (2) the respondent's partner's highest level of education (primary, secondary and higher education levels).
- At the state-level, we test for (1) the level of justification of IPV within the state of residence, and (2) share of IPV (physical or sexual) victims who sought help from unofficial sources.

We find that the average marginal effects of the respondent being employed in the paid and formal sector on IPV depend on a range of factors.¹⁰

- **Empowerment and agency within the household (Figure 11.1).** If a respondent is not involved in household decision-making, female employment is associated with a probability of IPV that is 1.5 percentage points higher. On the other hand, if the respondent is involved in household decision-making, having a job is associated with a probability of IPV that is lower by approximately 3.5 percentage points.

⁸ Since the NFHS database does not use formal/informal categories for occupation type, we have classified "formal" employment as being employed in professional, technical, managerial, clerical, or sales roles. Therefore, the term "formal" is an approximation.

⁹ Other state-level factors, while significant in the regression analysis either do not exert an additional effect through the interactions with female formal paid employment or do not have enough variance across states—we therefore do not discuss them separately in this section.

¹⁰ For all interaction terms included except for the interaction with husband's highest education level, the coefficient of the interaction term was statistically significant at the 95 percent significance level. For the interaction with husband's highest education level, the coefficient of interaction was significant at the 90 percent significance level for secondary education. This implies that the influence of women's formal and paid employment is significantly different conditional on the indicators included in the interactions. However, this does not necessarily mean that this influence will be significant at different levels. Despite this, we find significant (negative) effects of formal and paid employment at low values of state-level justification of violence and high values of state-level help-seeking by victims from friends and family.

- **Education of the partner (Figure 11.2).** The influence of the respondent having a job on IPV risk significantly changes based on the education level of the intimate partner. If the intimate partner has at least secondary or higher education, having a job is associated with a lower risk of IPV. On the other hand, if he has no education, having a job is associated with a risk of IPV that is higher by around 4.5 percentage points.
- **Normalization of violence at the societal level (Figure 11.3).** At relatively lower levels of justification of IPV within the state of residence (between 10 and 20 percent), economic empowerment is associated with a likelihood of IPV that is lower by approximately 4.9 to 6 percentage points. On the other hand, in states with relatively higher levels of justification of IPV (between 60 and 70 percent), having a job goes hand in hand with a likelihood of IPV that is higher by approximately 3.5 to 6 percentage points. We also find the same results at the average state level. For the group of states where the normalization or acceptance of violence was higher than the average normalization across all states in 2019, more women in formal employment is associated with higher average IPV incidence. The opposite relationship is found for the group of states where the acceptance of violence is lower on average. This can be seen in Table 4.

Table 4. Average State IPV, by Share of Women in Formal Work and Level of IPV Acceptance

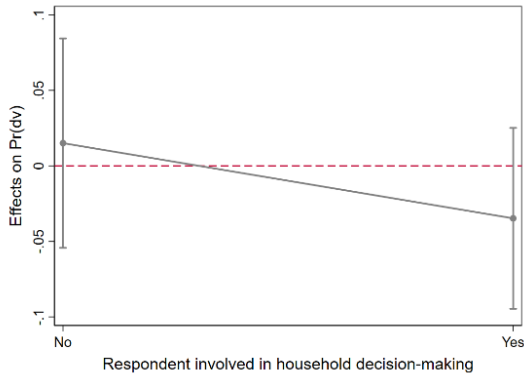
Acceptance of IPV	Share of women in formal work	
	<i>Low share in formal work</i>	<i>High share in formal work</i>
<i>High acceptance</i>	30.3	33.4
<i>Low acceptance</i>	23.2	17.7

Notes: The share in formal work at the state level is based on the “regular salary employee” status given in PLFS surveys.
Average acceptance of violence is based on NFHS data, and represents the combined state average for men and women.
All averages are calculated for the most recent NFHS wave (2019-21).

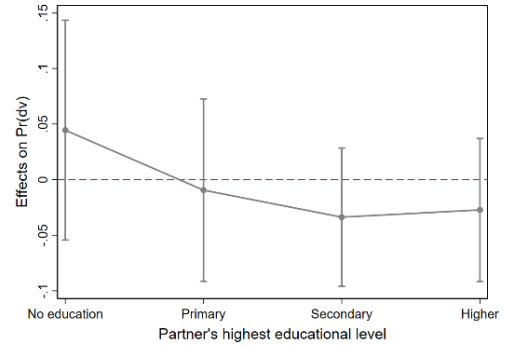
- **Social acceptance of reporting IPV (Figure 11.4).** If reporting (physical or sexual) IPV to friends and family (among other unofficial sources) is more widespread within the state of residence (around 35 percent of victims report IPV), having a job is associated with a likelihood of IPV that is lower by approximately 6.9 percentage points. On the other hand, if speaking out against IPV is less widespread, female employment (less than 14 percent) the risk of IPV is up to 4.2 percent higher.

Figure 11. India: Average Marginal Effects of Economic Empowerment and Individual and State-Level Interactions

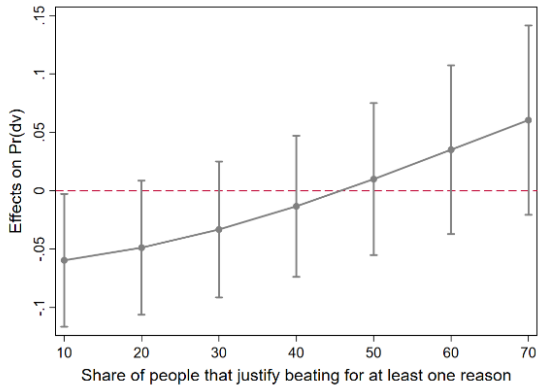
1. Involvement in Household Decision



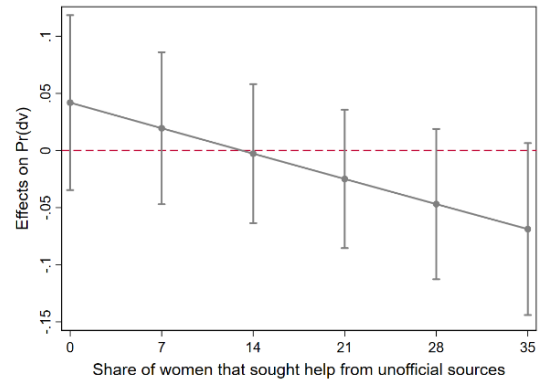
2. Partners' Highest Education Level



3. State-Level Attitudes Towards Violence



4. Help-Seeking from Unofficial Sources



Note: Bars indicate 95 percent confidence intervals.

Government Initiatives: Current and Past

The government has implemented several initiatives that aim to address gender-based violence and to empower women economically and socially. Further examination of and attention to the issues and findings flagged in the paper could enhance the overall impact of these efforts.

Government Initiatives to Protect Women from Violence

The Indian Constitution includes provisions that legally protect women from various violent acts, including rape, sexual assault, acid attacks, sexual harassment, trafficking, dowry death, cruelty—including torture by a woman's husband or relatives in connection with dowry demands—and honor killings. Considering the high rate of dowry-related deaths and cruelty linked to dowry demands, the Dowry Prohibition Act was enacted in 1961 to prohibit the demand for dowry. The government established a specialized Crimes Against Women (CAW) Cell at the central level in the Delhi police in 1983 (National Commission for Women 2020). This initiative aimed to create a more supportive environment for women to report violent crimes and provide victims with specialized resources, including family counseling. Since then, other cities and states in India have followed suit, with some southern states experimenting with all-women police stations.

Despite these legal protections, the Constitution did not include specific provisions addressing violence within the home (domestic violence) until 2005. The Protection of Women Against Domestic Violence Act (PWDVA 2005) is the first civil legislation specifically designed to support female victims of domestic violence. This Act also provided the first legal definition of domestic violence, encompassing physical, sexual, and emotional violence (Bhartiya Stree Shakti 2017). Recognizing the cultural and household dynamics that affect domestic violence cases, this law grants victims the right to secure accommodation within the shared household, the right to obtain protection orders for themselves and their children, monetary relief, compensation, temporary separation from family or partner, and relief from other suits and legal proceedings.

The current government has further stepped up its focus on this issue, particularly in devising new policies and implementing policies, both previous and current ones, to improve access to and the efficiency of institutions dedicated to preserving women's safety. In 2015, the Ministry of Women and Child Development began administering the One Stop Centre (OSC) scheme and the scheme to universalize Women Helplines (WHL). OSCs were established to support women affected by violence both within and outside the home by providing them with specialized services. The WHL scheme offers 24-hour emergency and non-emergency responses to women affected by violence, linking them with appropriate authorities, including the police, OSCs, medical professionals, and legal services. The Mahila Police Volunteers (MPV) scheme was also implemented in 2016 to increase the involvement of female police officers in cases related to crimes against women (Bhartiya Stree Shakti 2017).

Government Initiatives to Empower Women

The Indian Government has implemented several schemes and policies aimed at empowering women. These initiatives focus on four main dimensions of women's empowerment: legal protections and general empowerment, health and nutrition, education and economic empowerment, and political leadership.

Legal Protections and General Empowerment

In 1992, the government established a statutory board under the National Commission for Women Act (1990) with a specific mandate to track all legal safeguards provided for women, review existing legislation, and suggest amendments wherever necessary (Bhartiya Stree Shakti 2017). In 2001, the National Policy for the Empowerment of Women was implemented, with the goal of advancing, developing, and empowering women (Bhartiya Stree Shakti 2017).

The National Plan of Action for the Girl Child (1991-2000) was also implemented, specifically aimed at improving the chances of survival for young girls and infants and ultimately building a better future for them (Bhartiya Stree Shakti, 2017). More recently, the government launched the [Beti Bachao Beti Padhao Scheme \(2015\)](#), which aims to ensure the survival, protection, and education of girl children by addressing the declining sex ratio, creating social awareness, and enhancing the efficiency of welfare services for girls.

Other schemes aimed at promoting women's empowerment, especially for minority women, include the [Scheme for Leadership Development of Minority Women \(also known as Nai Roshni, launched in 2012-13\)](#). *Nai Roshni* was introduced to empower and instill confidence among minority women by providing knowledge, tools, and techniques for interacting with government systems, banks, and other institutions at all levels. The scheme supports women's leadership, educational programs, health and hygiene, financial, digital, and legal literacy, and advocacy for social change.

The [Mahila Shakti Kendra \(2017\)](#) was implemented in 115 of the most underdeveloped districts in India to support rural women by providing access to nutrition, health, employment, skill development, digital literacy, and more. In 2022, the government also launched the Integrated Women Empowerment Programme, an umbrella scheme aimed at strengthening interventions for the safety, security, and empowerment of women.

Health and Nutrition

Several schemes have been implemented to build on existing policies and introduce new initiatives aimed at improving maternal health. The [Pradhan Mantri Matru Vandana Yojana \(PMMVY 2017\)](#), the [Janani Suraksha Yojana \(2005\)](#), and the *POSHAN Abhiyaan* (2018) schemes focus on improving the nutritional status of women, especially pregnant women and new mothers. These schemes have been instrumental in promoting better health practices among pregnant women and improving access to nutrition and medical services. Additionally, the *Pradhan Mantri Ujjwala Yojana* (PMUY 2016) was launched to address the health and safety concerns of women by providing clean cooking fuel (LPG) to rural and underprivileged households.

Education, Skills, and Entrepreneurship

There have been multiple schemes and policies to promote education and entrepreneurship among women, enhance their skills, and improve employment opportunities. Special attention has been given to upskilling and fostering women-led development through entrepreneurship, as reflected in initiatives like the [Support to Training and Employment Programme for Women \(STEP 1986-87\)](#), [Trade Related Entrepreneurship Assistance and Development \(TREAD 2014\)](#), and the [Skill Upgradation and Mahila Coir Yojana \(2017\)](#). These programs focus on skill development to improve women's employability and encourage entrepreneurship.

Women's entrepreneurship is further supported through the [Women Entrepreneurship Platform \(WEP 2017\)](#), which provides information and services relevant to women entrepreneurs, and the Stand-Up India Scheme (2016), which aims

to promote entrepreneurship among women from Scheduled Castes (SC) and Scheduled Tribes (ST) categories, helping them establish greenfield enterprises.

A lot of attention has also been given to improving women's education, especially women's inclusion in Science and Technology fields. Schemes like [Women in Science and Engineering-KIRAN \(also known as WISE-KIRAN, implemented in 2002-03\)](#), the [Overseas Fellowship Scheme \(2017-18\)](#), and Vigyan Jyoti (2020) were all launched to promote the entry of women in Science and Technology fields, and support women who are already in these fields.

Political Leadership

Two key amendments to the Constitution have been introduced to ensure the inclusion of women in political leadership. The first is the [Seventy-third Amendment \(1992\)](#), which mandates a one-third reservation for women in Panchayats. The second is the [One Hundred and Sixth Amendment \(2023\)](#), which reserves one-third of all seats for women in the Lok Sabha, state legislative assemblies, and the Legislative Assembly of the National Capital Territory of Delhi.

Conclusion

Gender-based violence implies large losses for individuals, families, society, and the economy. Domestic violence is a global phenomenon. In this paper, we tried to answer two main questions related to this macrocritical issue for India: (i) When is a woman at a higher risk to face intimate partner violence and (ii) when does women's economic empowerment help reduce the risk of intimate partner violence? To answer these questions, we analyzed the main drivers of different types of IPV in India since 2005. We find that individual, partner and familial, community and socio-economic factors help explain IPV:

- A woman in India is at a higher risk for IPV if she is approximately in her late 30s or early 40s, and if she or her partner are educated only at the primary level or not at all. A family history of IPV, lower agency within her household, alcohol consumption and no involvement in household decision-making are also strong predictors of IPV. Lower wealth and urban residency, everything else equal, predict higher levels of IPV.
- We find that employment by itself is not a deterrent of IPV but needs to be complemented with a strong supporting framework to be associated with a lower risk of IPV. Work in the agriculture sector, as a manual (skilled or unskilled) worker and earning a higher income than the partner are factors that are associated with higher incidences of IPV at the individual level. Yet, the impact of women's employment on IPV depends on multiple factors and characteristics at both the household and state level. Combined with specific interventions—empowerment and agency at the household level, lower acceptance rates of IPV, higher male education, and normalization of reporting of violence—women's formal and paid employment can *reduce* the individual's risk of IPV.
- Importantly, institutions and enforcement matter. We find that seeking help from official sources (police officers, lawyers, social services)—a proxy of the availability of and the trust in the reporting infrastructure—is a strong deterrent of IPV—a stronger one than seeking help from friends and family. We find that when states have higher charge-sheeting rates for crimes against women, the risk of IPV for individuals living in these states is lower.

As the drivers of violence relate to individual, family, community and socio-economic issues—and women's economic empowerment and risk of violence are interdependent—effective policies also need to be multipronged, simultaneously empowering women economically while protecting the individual.

- Improving education for both men and women and creating more paid jobs for women in the formal sector will help deter IPV incidence while supporting women's economic empowerment. Here, tackling both supply-side constraints (investment in services and infrastructure, skills, addressing safety concerns) and demand side constraints (creating opportunities by promoting non-agricultural sectors, addressing occupational segregation) is important (IMF 2023). Gender diversity within formal employment, especially at senior levels in the corporate sector, is low, and increasing it could help reduce intimate partner violence, including by shifting attitudes towards working women and women in power. Implementing policies that tackle the issue of not just entry, but the retention of women within the formal labor force, both via supply and demand side, is necessary (Sahay and others 2024).
- Strengthening institutions, reporting infrastructure and availability of services to address intimate partner violence and increasing the awareness of the availability of services is important. Ensuring that the laws and the supportive frameworks are in place and effective is necessary, especially as Indian women currently enjoy just 60 percent of the legal protections that men do (World Bank 2024). Improving and building more infrastructure such as police stations, domestic violence help desks, social services, and hospitals is essential to deter IPV and support survivors. Increasing awareness of official sources of help for IPV victims (one-stop centers, counselling) could improve access and trust in these institutions, while better law enforcement and faster resolution of court cases could increase trust in reporting.
- Increasing awareness of the impact of IPV on the victim, their family and society and the economy can support efforts to shift attitudes, including through awareness raising campaigns that are tailored to the country's specific circumstances.

Reducing intimate partner violence, a highly complex problem, will benefit individual, families, societies, and provide a significant boost to India's macroeconomy—it requires urgent action. The complexity of the problem requires a multipronged approach to reduce and eliminate domestic violence. Government action is welcome and should continue, supported by communities and other stakeholders coming together in their area of expertise (family counselors, law enforcement, courts, NGOs, private sector, and others). As family history is a decisive correlate with current violence, such policy action is urgent, to prevent spillovers to future generations. Such efforts would foster better living conditions for women and girls, while helping India reap its massive economic development potential.

Annex I. Data Description

From the NFHS, our main dependent variable is a dummy which is equal to 1 if the respondent has ever experienced any form of domestic violence from her husband or partner, and 0 otherwise. We calculate this by combining multiple sub-questions included in the domestic violence module for all three survey waves, covering the incidence of physical, emotional, and sexual violence. We also create separate dummy indicators for physical, emotional, and sexual violence by combining the sub-questions only pertaining to the respective type of violence, and study the association between the incidence of physical, sexual, or emotional violence, and socio-ecological factors separately.

In addition to NFHS, the Periodic Labor Force Survey (PLFS) provides information on the state-level participation of women in leadership within the labor force. This is an individual-level survey based in India. We use data from three survey waves for the years 2005-06, 2017-18, and 2021-22. To get information on leadership, we create a dummy indicator which is equal to 1 if the individual's principal or subsidiary activity in the labor force is classified as "employer". We then average this indicator for the sub-sample of only women at the state-year level and merge it with the survey dataset.

Following the socio-ecological model, the independent variables we include can be divided into individual, relationship, household, and state-level factors. For these, we use data on individual women and their partners pertaining to their age, education, employment status, alcohol consumption, etc., and data on the familial, household, cultural, and socio-economic environment that surrounds them. These indicators, along with their place in the socio-ecological model, are discussed in detail in the paper.

Data measurement errors are a problem when it comes to domestic violence data, since domestic violence rates is usually underreported (either due to fear of negative consequences or due to the normalization of domestic violence or having different definitions of what "domestic violence" might mean). However, since this analysis uses DHS survey data which promises anonymity and does not report domestic violence cases to the authorities, the likelihood of under-reporting due to fear of negative consequences is lower. Furthermore, having specific and direct questions for domestic violence which are asked in a safe environment decreases the likelihood of under-reporting due to the normalization of domestic violence or having different definitions of domestic violence.

Annex Table 1. Data Source

Indicator	Definition	Source	Years
<i>Intimate Partner Violence (all)</i>	Dummy variable, equal to 1 if respondent has experienced any violence by husband or partner.	NFHS survey, Individual's/ Couple's recode (calculated)	2005, 2015, 2019
<i>Physical Violence</i>	Dummy variable, equal to 1 if respondent has experienced any (severe or less severe) physical violence by husband or partner.	NFHS survey, Individual's/ Couple's recode (calculated)	2005, 2015, 2019
<i>Sexual Violence</i>	Dummy variable, equal to 1 if respondent has experienced any sexual violence by husband or partner.	NFHS survey, Individual's/ Couple's recode	2005, 2015, 2019
<i>Emotional Violence</i>	Dummy variable, equal to 1 if respondent has experienced any emotional violence by husband or partner.	NFHS survey, Individual's/ Couple's recode	2005, 2015, 2019
<i>Age</i>	Current age of respondent in years (between 15 and 49)	NFHS survey, Individual's/ Couple's recode	1992, 1998, 2005, 2015, 2019
<i>Highest educational level</i>	Highest educational level attained by respondent Categorical indicator where categories are: 0: No education 1: Primary education 2: Secondary education 3: Higher education	NFHS survey, Individual's/ Couple's recode	1992, 1998, 2005, 2015, 2019
<i>Occupation</i>	Respondent's Occupation Categorical indicator where categories are: 0: not in work force/no occupation 1: professional/ technical/ managerial 2: clerical 3: sales 5: agricultural 7: services/household and domestic 8: manual - skilled and unskilled	NFHS survey, Individual's/ Couple's recode (calculated, number of categories reduced)	1992, 1998, 2005, 2015, 2019

<i>Type of earnings from respondent's work</i>	Categorical variable reporting the type of earnings the respondent earns given that she is employed. The categories are as follows: 0: not paid 1: cash only 2: cash and in-kind 3: in-kind only	NFHS survey, Individual's/ Couple's recode	1998, 2005, 2015, 2019
<i>Economic Empowerment</i>	Dummy variable, equal to 1 if the respondent is working in either a professional/ technical/ managerial (code 1 for occupation), clerical (code 2 for occupation), or sales (code 3 for occupation) role, and is paid in cash only (code 1 for type of earnings from respondent's work).	NFHS survey, Individual's/ Couple's recode (calculated)	1998, 2005, 2015, 2019
<i>Respondent's father beat her mother</i>	Dummy variable, equal to 1 if the respondent's father ever beat her mother.	NFHS survey, Individual's/ Couple's recode	2005, 2015, 2019
<i>Respondent drinks alcohol</i>	Dummy variable, equal to 1 if the respondent drinks alcohol.	NFHS survey, Individual's/ Couple's recode	1998, 2005, 2015, 2019
<i>Partner's highest educational level</i>	Highest educational level attained by respondent's partner Categorical indicator where categories are: 0: No education 1: Primary education 2: Secondary education 3: Higher education	NFHS survey, Couple's recode (men's indicator)	1992, 1998, 2005, 2015, 2019
<i>Partner's occupation</i>	Partner's Occupation Categorical indicator where categories are: 0: not in work force/no occupation 1: professional/ technical/ managerial 2: clerical 3: sales 5: agricultural 7: services/household and domestic 8: manual - skilled and unskilled	NFHS survey, Couple's recode (men's indicator) (calculated, number of categories reduced)	1992, 1998, 2005, 2015, 2019

<i>Partner drinks alcohol</i>	Dummy variable, equal to 1 if the respondent's father ever beat her mother.	NFHS survey, Couple's recode (men's indicator)	1998, 2005, 2015, 2019
<i>Respondent earns more than her partner</i>	Dummy variable, equal to 1 if both the partner and respondent are earning, and the respondent earns more than her partner; or the partner is not bringing in money and respondent is earning.	NFHS survey, Individual's/ Couple's recode (calculated)	2005, 2015, 2019
<i>Respondent has an account in a bank or other financial institution</i>	Dummy variable, equal to 1 if the respondent has bank or savings account that she uses.	NFHS survey, Individual's/ Couple's recode	2005, 2015, 2019
<i>Respondent involved in household decision-making (together or alone)</i>	Dummy variable, equal to 1 if the respondent at least partially participates in all household decision-making (responded "decides alone" or "decides together with partner" in all decision-making questions asked)	NFHS survey, Individual's/ Couple's recode (calculated)	1998, 2005, 2015, 2019
<i>Number of children aged 5 and under in household</i>	Number of children aged 5 and under in household	NFHS survey, Individual's/ Couple's recode	1992, 1998, 2005, 2015, 2019
<i>Number of household members</i>	Number of household members	NFHS survey, Individual's/ Couple's recode	1992, 1998, 2005, 2015, 2019
<i>Household head is female</i>	Dummy variable, equal to 1 if the respondent's household has a female head.	NFHS survey, Individual's/ Couple's recode	1992, 1998, 2005, 2015, 2019
<i>Rural residence</i>	Dummy variable, equal to 1 if the respondent's de facto residence is in a rural area.	NFHS survey, Individual's/ Couple's recode	1992, 1998, 2005, 2015, 2019
<i>Wealth Group</i>	Refers to the relative wealth of the household where the respondent lives, divided into quintiles with codes as follows: 1: poorest 2: poorer 3: middle 4: richer 5: richest This is a composite measure of a household's cumulative living standard, calculated using data on a	NFHS survey, Individual's/ Couple's recode	1992, 1998, 2005, 2015, 2019

	household's ownership of selected assets, such as televisions and bicycles; materials used for housing construction; and types of water access and sanitation facilities.		
<i>Religion</i>	Respondent's religion. Categorical variable, where the categories are as follows: 1: Hindu 2: Muslim 3: Christian 4: Sikh 5: Buddhist/Neo Buddhist 6: Jain 7: Jewish 9: No religion 96: Other	NFHS survey, Individual's/ Couple's recode (calculated, number of categories reduced)	1992, 1998, 2005, 2015, 2019
<i>Caste or Tribe</i>	Respondent's caste or tribe. Combines two indicators from the survey datasets to make the following categories: 0: No caste/tribe 1: Schedule Caste 2: Schedule Tribe 3: Other Backward Class 4: None of them	NFHS survey, Individual's/ Couple's recode (calculated, number of categories reduced)	1992, 1998, 2005, 2015, 2019
<i>Justifies wife-beating for at least one reason (men and women)</i>	Dummy variable, equal to 1 if the respondent (male or female) responds "yes" to at least one of the wife-beating justification question.	NFHS survey, Individual's/ Men's recode (calculated)	1998, 2005, 2015, 2019
<i>Share of women that justify beating for at least one reason</i>	State-level weighted average of the justifies wife-beating dummy for all women surveyed (multiplied by 100 to get percentage)	NFHS survey, Individual's recode (calculated)	1998, 2005, 2015, 2019
<i>Share of men that justify beating for at least one reason</i>	State-level weighted average of the justifies wife-beating dummy for all men surveyed (multiplied by 100 to get percentage)	NFHS survey, Men's recode (calculated)	1998, 2005, 2015, 2019
<i>Share of people that justify beating for at least one reason</i>	State average of the share of men and women that justify beating for at least one reason.	NFHS survey, Individual's/ Men's recode (calculated)	1998, 2005, 2015, 2019

<i>Sought help from unofficial sources</i>	Dummy variable, equal to 1 if the respondent answered “yes” to at least one of the help-seeking questions if the source mentioned in the question was an “unofficial source” (i.e. all sources other than police, medical professionals, social services, and lawyers) Note: this is only available for women who responded “yes” to experience either physical or sexual violence.	NFHS survey, Individual’s recode (calculated)	2005, 2015, 2019
<i>Share of women that sought help from unofficial sources</i>	State-level weighted average of the “sought help from unofficial sources” dummy for all women who were surveyed and reported experiencing either physical or sexual violence (multiplied by 100 to get percentage).	NFHS survey, Individual’s recode (calculated)	2005, 2015, 2019
<i>Sought help from official sources</i>	Dummy variable, equal to 1 if the respondent answered “yes” to at least one of the help-seeking questions if the source mentioned in the question was an “official source” (i.e. police, medical professionals, social services, and lawyers) Note: this is only available for women who responded “yes” to experience either physical or sexual violence.	NFHS survey, Individual’s recode (calculated)	2005, 2015, 2019
<i>Share of women that sought help from official sources</i>	State-level weighted average of the “sought help from official sources” dummy for all women who were surveyed and reported experiencing either physical or sexual violence (multiplied by 100 to get percentage).	NFHS survey, Individual’s recode (calculated)	2005, 2015, 2019
<i>CAW Chargesheeting rate</i>	Charge-sheeting rate recorded at the state level for all crimes categorized under “Crimes Against Women” by the National Crimes Records Bureau (NCRB).	Crime in India (published by NCRB)	2006, 2016, 2022
<i>Share of men/women who are employers</i>	State-level average share of men/women surveyed under PLFS/NSS, whose principal or subsidiary status was categorized under “Worked in household enterprise (self-employed) as employer”.	Periodic Labor Force Survey (PLFS)/ National Sample Survey (NSS) (calculated)	2005-06, 2017-18, 2021-22

<i>Share of men/women attending domestic duties</i>	State-level average share of men/women surveyed under PLFS/NSS, whose principal or subsidiary status was categorized under either "Attended domestic duties only" or "Attended domestic duties and was also engaged in miscellaneous work for household use".	Periodic Labor Force Survey (PLFS)/ National Sample Survey (NSS) (calculated)	2005-06, 2017-18, 2021-22
<i>Share of men/women working as regular salaried/ wage employee</i>	State-level average share of men/women surveyed under PLFS/NSS, whose principal or subsidiary status was categorized under either "Worked as regular salaried/wage employee".	Periodic Labor Force Survey (PLFS)/ National Sample Survey (NSS) (calculated)	2005-06, 2017-18, 2021-22
<i>Women to men ratio of share working as regular salaried/ wage employee</i>	Ratio of the share of women working as regular salaried/ wage employee to the share of men working as regular salaried/ wage employee. Indicates gender parity within formal and salaried positions at the state level.	Periodic Labor Force Survey (PLFS)/ National Sample Survey (NSS) (calculated)	2005-06, 2017-18, 2021-22
<i>Per Capita Net State Domestic Product (Current Prices)</i>	Per Capita Net State Domestic Product (Current Prices, in Rupees).	National Statistics Office, Ministry of Statistics and Programme Implementation, Government of India.	2005, 2015, 2019

Annex II. State-level Evidence

Annex Table 2. Results from Pooled Regressions for Each Type of Violence

	Share of women who experienced IPV	Share of women who experienced physical IPV	Share of women who experienced sexual IPV	Share of women who experienced emotional IPV
Ratio of share of women to men with higher education	-16.83**	-14.96*	-3.937*	-7.961***
	(7.669)	(8.091)	(2.081)	(2.542)
Share of people that justify beating for at least one reason	0.260***	0.235***	-0.00265	0.123***
	(0.0774)	(0.0770)	(0.0256)	(0.0275)
Per Capita Net State Domestic Product (Log transformed)	-7.541***	-7.463***	-3.202**	-1.159
	(2.367)	(2.470)	(0.617)	(0.867)
Constant	116.1***	111.1***	45.20***	26.26***
	(24.11)	(25.33)	(6.661)	(9.082)
Year FE	Yes	Yes	Yes	Yes
Observations	95	95	95	95
Mean of Dep. Variable	28.73	24.95	6.205	12.10
	Share of women who experienced IPV	Share of women who experienced physical IPV	Share of women who experienced sexual IPV	Share of women who experienced emotional IPV
Women to men ratio of share working as regular salaried/ wage employee	-20.78*	-21.91*	-5.788*	-6.044*
	(8.362)	(8.433)	(2.151)	(2.941)
Share of people that justify beating for at least one reason	0.337***	0.308**	0.0165	0.154**
	(0.0722)	(0.0717)	(0.0248)	(0.0284)
Per Capita Net State Domestic Product (Log transformed)	-8.887***	-8.453***	-3.461***	-2.023*
	(1.764)	(1.771)	(0.590)	(0.772)
Constant	122.8***	115.5**	46.35**	31.07**
	(20.59)	(20.75)	(6.940)	(9.050)
Year FE	Yes	Yes	Yes	Yes
Observations	95	95	95	95
Mean of Dep. Variable	28.73	24.95	6.205	12.10
	Share of women who experienced IPV	Share of women who experienced physical IPV	Share of women who experienced sexual IPV	Share of women who experienced emotional IPV
Share of women attending domestic duties	0.211**	0.200*	0.0971**	0.0732*
	(0.0859)	(0.0885)	(0.0239)	(0.0259)
Share of men attending domestic duties	-0.262	-0.545	0.201	-0.297
	(0.904)	(0.927)	(0.214)	(0.366)
Share of people that justify beating for at least one reason	0.353***	0.324**	0.0240	0.164**
	(0.0716)	(0.0722)	(0.0211)	(0.0261)
Per Capita Net SDP (Log transformed)	-8.467***	-8.149***	-3.087**	-1.779**
	(1.675)	(1.780)	(0.420)	(0.705)
Constant	98.09**	92.93**	33.54**	21.88**
	(21.18)	(22.71)	(5.062)	(8.141)
Year FE	Yes	Yes	Yes	Yes
Observations	95	95	95	95
Mean of Dep. Variable	28.73	24.95	6.205	12.10
	Share of women who experienced IPV	Share of women who experienced physical IPV	Share of women who experienced sexual IPV	Share of women who experienced emotional IPV
CAW Chargesheeting rate	-0.0699	-0.0616	-0.0410*	0.0253
	(0.0557)	(0.0512)	(0.0238)	(0.0293)
Share of people that justify beating for at least one reason	0.318**	0.287**	0.0136	0.144**
	(0.0706)	(0.0712)	(0.0218)	(0.0273)
Per Capita Net State Domestic Product (Log transformed)	-9.910**	-9.569**	-3.677**	-2.465**
	(2.192)	(2.252)	(0.639)	(0.847)
Constant	134.7**	127.5**	50.52**	32.71**
	(25.30)	(26.37)	(7.539)	(9.719)
Year FE	Yes	Yes	Yes	Yes
Observations	95	95	95	95
Mean of Dep. Variable	28.73	24.95	6.205	12.10

Annex III. Regression Labels

The regression we run is as follows:

$$\begin{aligned}
 Y_{i,h,s} = & \alpha + \beta_1 age_i + \beta_2 age_i^2 + \beta_3 primary_i + \beta_4 secondary_i + \beta_5 higher_i + \beta_6 professional_i + \beta_7 services_i + \beta_8 agriculture_i \\
 & + \beta_9 formal_i + \beta_{10} history_i + \beta_{11} alcohol_i + \beta_{12} agedifference_i + \beta_{13} hprimary_i + \beta_{14} hsecondary_i \\
 & + \beta_{15} hhhigher_i + \beta_{16} hprofessional_i + \beta_{17} hservices_i + \beta_{18} hagriculture_i + \beta_{19} halcohol_i + \beta_{20} earnmore_i \\
 & + \beta_{21} bank_i + \beta_{22} decision_i \\
 & + \beta_{23} hindu_i + \beta_{24} muslim_i + \beta_{25} christian_i + \beta_{26} sikh_i + \beta_{27} buddhist_i + \beta_{28} jain_i + \beta_{29} scst_i + \beta_{30} obc_i \\
 & + \beta_{31} nocaste_i + \beta_{32} children_h + \beta_{33} members_h + \beta_{34} hhgender_h + \beta_{35} rural_h + \beta_{36} poorer_h + \beta_{37} middle_h \\
 & + \beta_{38} richer_h + \beta_{39} richest_h + \beta_{40} justdv_s + \beta_{41} unofficialhelp_s + \beta_{42} officialhelp_s \\
 & + \beta_{43} CAWchargesheeting_s + \beta_{44} employers_s + \sigma_s + \theta_t + \epsilon_i
 \end{aligned}$$

The definition of each term is given in the following table:

Annex Table 3. Variable Labels

Term	Definition
<i>age_i</i>	Current age of respondent <i>i</i> in number of years.
<i>age²_i</i>	Current age of respondent <i>i</i> in number of years (squared).
<i>(h)primary_i</i>	Highest educational level of respondent <i>i</i> ('s husband) is primary education.
<i>(h)secondary_i</i>	Highest educational level of respondent <i>i</i> ('s husband) is secondary education.
<i>(h)higher_i</i>	Highest educational level of respondent <i>i</i> ('s husband) is tertiary education.
<i>(h)professional_i</i>	Dummy variable which is coded as 1 if respondent <i>i</i> ('s husband) is employed in Professional, Technical, Managerial, Clerical, or Sales roles, 0 otherwise.
<i>(h)services_i</i>	Dummy variable which is coded as 1 if respondent <i>i</i> ('s husband) is employed in Services (household and domestic), 0 otherwise.
<i>(h)agriculture_i</i>	Respondent <i>i</i> ('s husband) is employed in Agricultural or Manual (skilled and unskilled) roles, 0 otherwise.
<i>formal_i</i>	Dummy variable which is coded as 1 if respondent <i>i</i> is working in the formal sector (Professional, Technical, Managerial, Clerical, or Sales roles) and is paid in cash only, 0 otherwise.
<i>history_i</i>	Dummy variable which is coded as 1 if respondent <i>i</i> 's father beat her mother, 0 otherwise.
<i>(h)alcohol_i</i>	Dummy variable which is coded as 1 if respondent <i>i</i> ('s husband) drinks alcohol, 0 otherwise.
<i>agedifference_i</i>	Age difference between respondent <i>i</i> and her husband, in years.
<i>earnmore_i</i>	Dummy variable which is coded as 1 if respondent <i>i</i> earns more than her husband (or if the respondent has earnings in cash and her husband does not), 0 otherwise.
<i>bank_i</i>	Dummy variable which is coded as 1 if respondent <i>i</i> has an account in a bank or other financial institution, 0 otherwise.
<i>decision_i</i>	Dummy variable which is coded as 1 if respondent <i>i</i> is involved in all household decisions listed in the NFHS survey (either together with her husband or alone), 0 otherwise.

<i>hindu_i</i>	Dummy variable which is coded as 1 if respondent <i>i</i> identifies as Hindu, 0 otherwise.
<i>muslim_i</i>	Dummy variable which is coded as 1 if respondent <i>i</i> identifies as Muslim, 0 otherwise.
<i>christian_i</i>	Dummy variable which is coded as 1 if respondent <i>i</i> identifies as Christian, 0 otherwise.
<i>sikh_i</i>	Dummy variable which is coded as 1 if respondent <i>i</i> identifies as Sikh, 0 otherwise.
<i>buddhist_i</i>	Dummy variable which is coded as 1 if respondent <i>i</i> identifies as Buddhist, 0 otherwise.
<i>jain_i</i>	Dummy variable which is coded as 1 if respondent <i>i</i> identifies as Jain, 0 otherwise.
<i>scst_i</i>	Dummy variable which is coded as 1 if respondent <i>i</i> identifies as a member of Scheduled Castes or Scheduled Tribe, 0 otherwise.
<i>obc_i</i>	Dummy variable which is coded as 1 if respondent <i>i</i> identifies as a member of Other Backward Classes, 0 otherwise.
<i>nocaste_i</i>	Dummy variable which is coded as 1 if respondent <i>i</i> does not identify as a member of any listed caste or tribe, 0 otherwise.
<i>children_h</i>	Number of children aged under 5 years living in household <i>h</i> .
<i>members_h</i>	Number of listed members living in household <i>h</i> .
<i>hhgender_h</i>	Dummy variable which is coded as 1 if household <i>h</i> has a female head, 0 otherwise.
<i>rural_h</i>	Dummy variable which is coded as 1 if household <i>h</i> is located in a rural area, 0 otherwise.
<i>poorer_h</i>	Dummy variable which is coded as 1 if wealth status of household <i>h</i> is classified as “poorer” (2 nd lowest, after “poorest”), 0 otherwise.
<i>middle_h</i>	Dummy variable which is coded as 1 if wealth status of household <i>h</i> is classified as “middle” (3 rd lowest), 0 otherwise.
<i>richer_h</i>	Dummy variable which is coded as 1 if wealth status of household <i>h</i> is classified as “richer” (2 nd highest), 0 otherwise.
<i>richest_h</i>	Dummy variable which is coded as 1 if wealth status of household <i>h</i> is classified as “richest” (highest), 0 otherwise.
<i>justdv_s</i>	Share of people within respondent’s state of residence <i>s</i> that justify wife-beating for at least one of the reasons listed on the NFHS questionnaire.
<i>unofficialhelp_s</i>	Share of victims of either physical or sexual violence within respondent’s state of residence <i>s</i> that sought help from at least one of the unofficial sources (all sources other than police, lawyers, doctors, or NGOs) listed on the NFHS questionnaire.
<i>officialhelp_s</i>	Share of victims of either physical or sexual violence within respondent’s state of residence <i>s</i> that sought help from at least one of the following sources: police, lawyers, doctors, or social services.
<i>CAWchargesheeting_s</i>	Charge-sheeting rate recorded for crimes against women (CAW) within respondent’s state of residence <i>s</i> .
<i>employers_s</i>	Share of women within respondent’s state of residence <i>s</i> for whom either principal or subsidiary activity is classified as “employers” (within the self-employed/household enterprise section) in the PLFS questionnaire.
σ_s	State-level fixed effects for respondent’s state of residence <i>s</i> .
θ_t	Year fixed effects.

Annex IV. Logistic Regression Results

Annex Table 4. Logistic Regression (All Waves)

VARIABLES	(1) Intimate Partner Violence (all)	(2) Physical Violence	(3) Sexual Violence	(4) Emotional Violence
Current age	0.108*** (10.282)	0.128*** (11.730)	0.052*** (2.662)	0.062*** (4.289)
Current age (squared)	-0.001*** (-8.808)	-0.002*** (-10.139)	-0.001*** (-2.614)	-0.001*** (-3.360)
Highest educational level = 1, Primary	0.026 (0.839)	0.011 (0.343)	-0.002 (-0.042)	-0.009 (-0.225)
Highest educational level = 2, Secondary	-0.105*** (-3.497)	-0.142*** (-4.589)	-0.118** (-2.105)	-0.002 (-0.044)
Highest educational level = 3, Higher	-0.551*** (-9.361)	-0.577*** (-9.259)	-0.425*** (-3.374)	-0.275*** (-3.241)
Occupation = 1, Professional / Technical / Managerial / Clerical / Sales	0.199 (1.348)	0.045 (0.293)	0.589** (2.450)	0.375* (1.900)
Occupation = 2, Services (household and domestic)	0.284*** (3.943)	0.266*** (3.543)	0.228** (2.113)	0.346*** (4.118)
Occupation = 3, Agricultural or Manual (skilled and unskilled)	0.298*** (11.759)	0.285*** (10.953)	0.327*** (7.290)	0.258*** (7.712)
Respondent is working in the formal sector and is paid in cash only	-0.078 (-0.495)	0.052 (0.318)	-0.439* (-1.662)	-0.238 (-1.129)
Respondent's father beat her mother	1.206*** (46.862)	1.206*** (46.681)	0.961*** (23.828)	0.952*** (30.901)
Respondent drinks alcohol	0.489*** (7.160)	0.379*** (5.518)	0.387*** (3.353)	0.510*** (6.450)
Age difference between partner and respondent	0.001	-0.002	-0.004	0.006

	(0.426)	(-0.812)	(-0.799)	(1.591)
Partner's highest educational level = 1, Primary	0.017	0.023	0.068	-0.014
	(0.522)	(0.713)	(1.232)	(-0.322)
Partner's highest educational level = 2, Secondary	-0.102***	-0.103***	-0.062	-0.109***
	(-3.392)	(-3.370)	(-1.215)	(-2.779)
Partner's highest educational level = 3, Higher	-0.279***	-0.304***	-0.270***	-0.343***
	(-5.658)	(-5.857)	(-2.860)	(-4.868)
Partner's occupation = 1, Professional / Technical / Managerial / Clerical / Sales	-0.073	-0.067	-0.110	-0.061
	(-1.153)	(-0.993)	(-1.092)	(-0.747)
Partner's occupation = 2, Services (household and domestic)	-0.185***	-0.132*	-0.218*	-0.174*
	(-2.584)	(-1.756)	(-1.841)	(-1.907)
Partner's occupation = 3, Agricultural or Manual (skilled and unskilled)	-0.022	0.007	-0.170*	-0.060
	(-0.378)	(0.109)	(-1.875)	(-0.811)
Partner drinks alcohol	0.298***	0.320***	0.316***	0.299***
	(12.992)	(13.575)	(7.819)	(9.788)
Respondent earns more than her partner	0.138***	0.153***	0.283***	0.318***
	(2.825)	(3.073)	(3.868)	(5.596)
Respondent has an account in a bank or other financial institution	0.002	0.020	-0.013	-0.022
	(0.099)	(0.793)	(-0.288)	(-0.680)
Respondent involved in household decision-making (together or alone)	-0.386***	-0.342***	-0.609***	-0.490***
	(-18.165)	(-15.603)	(-15.606)	(-17.070)
Number of children aged 5 and under in household	0.081***	0.091***	0.064***	0.055***
	(5.944)	(6.483)	(2.759)	(3.064)
Number of household members	-0.015***	-0.018***	-0.004	-0.021***
	(-2.654)	(-2.946)	(-0.388)	(-2.825)

Household head is female	-0.071 (-1.421)	-0.087* (-1.657)	-0.048 (-0.583)	0.053 (0.849)
Rural residence	-0.091*** (-3.210)	-0.106*** (-3.611)	0.012 (0.227)	-0.073* (-1.941)
Wealth Group = 2, Poorer	0.001 (0.018)	-0.002 (-0.077)	-0.024 (-0.447)	-0.036 (-0.889)
Wealth Group = 3, Middle	-0.160*** (-4.731)	-0.164*** (-4.705)	-0.138** (-2.356)	-0.167*** (-3.695)
Wealth Group = 4, Richer	-0.290*** (-7.263)	-0.283*** (-6.863)	-0.254*** (-3.579)	-0.336*** (-6.258)
Wealth Group = 5, Richest	-0.560*** (-10.992)	-0.595*** (-11.148)	-0.439*** (-4.437)	-0.488*** (-6.844)
Religion = 1, Hindu	0.383*** (2.817)	0.319** (2.252)	-0.180 (-0.746)	0.328 (1.563)
Religion = 2, Muslim	0.578*** (4.123)	0.517*** (3.545)	-0.015 (-0.061)	0.529** (2.459)
Religion = 3, Christian	0.419*** (2.835)	0.330** (2.151)	0.017 (0.063)	0.373* (1.677)
Religion = 4, Sikh	0.311* (1.873)	0.220 (1.284)	-0.405 (-1.344)	0.303 (1.204)
Religion = 5, Buddhist/Neo-Buddhist	0.581*** (3.289)	0.552*** (3.048)	0.086 (0.242)	0.636** (2.502)
Religion = 6, Jain	0.088 (0.316)	0.082 (0.277)	0.228 (0.469)	-0.012 (-0.033)
Caste or Tribe = 1, SC/ST	0.142*** (4.213)	0.167*** (4.744)	-0.019 (-0.308)	0.035 (0.759)
Caste or Tribe = 2, OBC	0.054* (1.780)	0.074** (2.333)	-0.135** (-2.438)	-0.057 (-1.352)
Caste or Tribe = 3, No Caste/Tribe	-0.018 (-0.304)	-0.038 (-0.594)	0.200* (1.941)	0.005 (0.062)
Share of people that justify beating for at least one reason	0.029*** (14.234)	0.025*** (11.917)	0.030*** (8.669)	0.030*** (11.663)
Share of women that sought help from unofficial sources	-0.002 (-0.545)	0.003 (0.860)	-0.041*** (-6.781)	0.003 (0.727)
Share of women that	-0.187***	-0.194***	-0.228***	-0.090***

sought help from official sources	(-7.767)	(-7.635)	(-5.185)	(-2.966)
CAW Charge- sheeting rate	-0.004***	-0.003**	-0.011***	0.004**
Share of women who are employers	(-3.166)	(-2.340)	(-4.900)	(2.188)
State = 2, Himachal Pradesh	-0.216***	-0.206***	-0.162	-0.099
	(-3.465)	(-3.090)	(-1.279)	(-1.129)
State = 3, Punjab	0.947***	1.076***	1.296***	0.677***
	(5.998)	(6.173)	(4.763)	(3.325)
State = 4, Chandigarh	1.197***	1.395***	1.587***	0.656***
	(10.790)	(11.787)	(7.917)	(4.485)
State = 5, Uttarakhand	1.082***	1.421***	1.377**	0.656
	(3.414)	(4.447)	(2.200)	(1.279)
State = 6, Haryana	1.120***	1.365***	0.676***	0.531***
	(10.430)	(11.684)	(3.345)	(3.652)
State = 7, NCT of Delhi	1.527***	1.764***	1.390***	0.947***
	(17.674)	(18.594)	(9.108)	(8.431)
State = 8, Rajasthan	1.551***	1.864***	1.081***	0.906***
	(11.542)	(13.040)	(4.371)	(4.736)
State = 9, Uttar Pradesh	1.196***	1.394***	0.884***	0.694***
	(15.071)	(15.794)	(6.190)	(6.822)
State = 10, Bihar	1.385***	1.667***	0.815***	0.537***
	(20.358)	(21.640)	(6.350)	(6.265)
State = 11, Sikkim	1.629***	1.911***	1.163***	0.825***
	(20.667)	(21.991)	(8.157)	(8.414)
State = 12, Arunachal Pradesh	0.059	-0.004	0.482	0.049
	(0.301)	(-0.020)	(1.593)	(0.201)
State = 13, Nagaland	0.554***	0.771***	0.003	0.142
	(5.391)	(6.952)	(0.017)	(1.065)
State = 14, Manipur	-0.026	-0.196	-0.426*	0.140
	(-0.222)	(-1.469)	(-1.791)	(0.971)
State = 15, Mizoram	0.688***	1.047***	-0.661***	-0.327**
	(5.873)	(8.381)	(-2.943)	(-2.127)
State = 16, Tripura	-0.068	0.183	-1.460***	-0.471**
	(-0.472)	(1.194)	(-3.859)	(-2.227)
State = 17, Meghalaya	1.349***	1.516***	1.555***	0.740***
	(13.110)	(13.594)	(8.670)	(5.696)
	0.254**	0.354***	-0.188	0.207

	(2.075)	(2.660)	(-0.821)	(1.294)
State = 18, Assam	1.187***	1.483***	0.527***	0.602***
	(13.888)	(15.810)	(3.318)	(5.329)
State = 19, West Bengal	1.327***	1.534***	1.432***	0.518***
	(15.909)	(16.563)	(9.654)	(4.852)
State = 20, Jharkhand	1.225***	1.412***	1.127***	0.440***
	(13.831)	(14.538)	(6.865)	(3.673)
State = 21, Odisha	1.019***	1.213***	0.899***	0.181*
	(12.857)	(13.833)	(6.231)	(1.742)
State = 22, Chhattisgarh	1.000***	1.260***	0.696***	0.299***
	(11.270)	(12.996)	(4.203)	(2.604)
State = 23, Madhya Pradesh	1.205***	1.434***	0.844***	0.452***
	(15.683)	(16.766)	(6.019)	(4.604)
State = 24, Gujarat	0.908***	1.003***	0.721***	0.541***
	(11.004)	(10.969)	(4.740)	(5.203)
State = 25, Dadra & Nagar Haveli & Daman & Diu	0.850***	1.041***	0.338	0.391*
	(4.889)	(5.601)	(1.036)	(1.742)
State = 26, Maharashtra	0.884***	1.180***	0.011	0.315***
	(10.817)	(13.080)	(0.069)	(3.098)
State = 27, Andhra Pradesh	0.075	0.501***	-1.114***	-0.645***
	(0.842)	(5.181)	(-6.333)	(-5.715)
State = 28, Karnataka	0.541***	0.861***	0.419***	-0.072
	(6.350)	(9.211)	(2.667)	(-0.671)
State = 29, Goa	0.538***	0.574***	0.447	0.295
	(3.596)	(3.423)	(1.316)	(1.485)
State = 30, Lakshadweep	-0.683	-0.731	0.397	-1.537**
	(-1.559)	(-1.364)	(0.628)	(-2.156)
State = 31, Kerala	1.104***	1.269***	1.433***	0.030
	(6.670)	(7.080)	(4.219)	(0.136)
State = 32, Tamil Nadu	0.729***	1.027***	-0.161	-0.101
	(8.921)	(11.378)	(-1.027)	(-0.956)
State = 33, Puducherry	0.873***	1.025***	0.445	0.222
	(4.748)	(5.349)	(1.178)	(0.986)
State = 34, Andaman & Nicobar Islands	0.496**	0.660***	-0.823	-0.510
	(2.303)	(2.968)	(-1.483)	(-1.519)

State = 35, Telangana	0.359*** (3.341)	0.713*** (6.211)	-0.448** (-2.266)	-0.598*** (-4.491)
State = 36, Ladakh	0.087 (0.390)	-0.208 (-0.747)	-0.066 (-0.171)	0.045 (0.174)
Year = 2015	-0.097* (-1.943)	-0.039 (-0.756)	-0.584*** (-6.350)	0.207*** (3.011)
Year = 2019	0.010 (0.172)	0.045 (0.751)	-0.511*** (-4.793)	0.387*** (5.054)
Constant	-4.419*** (-15.171)	-5.209*** (-17.091)	-2.667*** (-5.112)	-5.238*** (-12.980)
Observations	124,158	124,158	124,158	124,158
Wald (81)	7481	7620	2629	3314
Prob > Wald	0.000	0.000	0.000	0.000
Pseudo R2	0.123	0.127	0.103	0.0784

z-statistics in parentheses
*p<.10; **p<.05; ***p<.01

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