No Room of One's Own: Inherited Norms and Women's Lifetime Labor Market Non-Participation

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Abstract

Using data on older women in India matched to ancestral ethnolinguistic backgrounds, we examine how inherited norms shape women's lifetime work attachment and the consequences of these roles later in life. We find that women from communities with historically greater female participation in production are less likely to remain outside the labor force over their lifetime. Yet among women who never worked, those from these same backgrounds report worse psychological well-being and greater mistreatment in old age. Our conceptual framework distinguishes the economic resources associated with a woman's labor market attachment from the social consequences of conforming to or departing from community expectations. We find that financial control is related to women's work status regardless of ancestral norms, while household decision-making also varies with whether women's work status conforms to community expectations. These findings suggest that expanding women's economic opportunities can strengthen their financial control, but their participation in household decision-making will also depend on whether their economic roles are socially accepted.

Keywords: Ancestral norms; Female labor force participation; Social enforcement; India

JEL Codes: J16, J21, D10, Z13

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1 Introduction

Gender norms can shape women's roles within the household and the labor market, but we know relatively little about how they shape women's labor market trajectories over the life course and the longer-run consequences associated with these roles. Much of the existing research examines labor supply at a point in time, focusing on women's current employment decisions in response to wages, household responsibilities, and prevailing norms. This leaves open the question of whether inherited norms shape the adoption of labor market roles over the course of a woman's life and what these roles mean for her well-being later in life.

A related challenge is that the same norms that shape women's labor market roles may also shape how households respond to those roles. Norms can therefore influence both whether a woman adopts a particular role (such as never participating in the labor market) and how her kin evaluate her for occupying it, making it difficult to distinguish the consequences of the role from the expectations that shaped its adoption.

In this paper, we examine the relation between inherited gender norms, women's lifetime labor market participation, and later-life measures of well-being. We focus on India, where women's labor force participation remains among the lowest in the world, making the adoption of a non-working role particularly salient. Rather than focusing on women's employment at a point in time, we study whether women ever engaged in market work over the course of their lives. This measure captures long-run economic roles that are more likely to be shaped by inherited norms. We combine individual-level data from the Longitudinal Ageing Study of India (LASI) with ethnolinguistic information on ancestral characteristics that reflect historical gender-role structures, including the gendered division of production, production technologies, and marriage institutions.

A growing body of research uses ancestral characteristics as proxies for persistent cultural norms to study their long-run effects on economic outcomes (Gennaioli and Rainer, 2007; Michalopoulos and Papaioannou, 2013; Michalopoulos et al., 2019). This literature links ancestral norms to a host of economic outcomes, including education (Ashraf et al., 2020), land reforms (La Ferrara and Milazzo, 2017), institutional development and le-

gal outcomes (Bargain et al., 2024), and female labor force participation (Alesina et al., 2013; Righetto, 2023; Tur-Prats, 2019, 2021). The main idea behind this literature is that historical norms and cultural practices can persist across generations and continue to shape economic behavior even after the original conditions that produced them have disappeared.

Within this literature, norms are often conceptualized as operating through two related but distinct channels. Cortés et al. (2026) distinguish between first-order beliefs, or internalized gender norms, which reflect an individual's own beliefs about appropriate behavior, and second-order beliefs, or external gender norms, which shape behavior through expectations about what others believe one ought to do.

A large literature shows that historical institutions and cultural practices continue to shape gender norms and women's economic outcomes. For example, Alesina et al. (2013) find that regions with a history of plough-based cultivation have lower female labor force participation today, consistent with Boserup (1970), who links such technologies to more restrictive gender roles. Similarly, Carranza (2014) shows that variation in soil conditions affects women's agricultural employment by altering the demand for female labor. Other work examines how cultural institutions such as endogamy (Righetto, 2023), patrilineality (Deininger et al., 2013), patrilocal residence (Dyson and Moore, 1983), bride price and dowry (S. Anderson, 2007; Ashraf et al., 2020), stem family system (Tur-Prats, 2019, 2021), and polygyny (Tertilt, 2005) shape gender equality and female labor force participation.[1]

Another strand of literature examines the role of second-order beliefs and the social processes through which norms are reinforced. These include peer effects, family networks, and institutional constraints that shape how behavior is evaluated and sanctioned. In many settings, restrictions on mobility and concerns around social reputation limit women's economic participation (Chakraborty et al., 2018; Chen, 1995; Jayachandran, 2015), often reinforced by caste and kin-based structures (Luke and Munshi, 2011).

[1]Internalized gender norms are also influenced by role models. For instance, Deininger et al. (2022) show that political reservations for women in India increased female labor supply, while Beaman et al. (2012) document positive effects on educational attainment.

At the same time, exposure to different peer environments can shift norms and behavior. For example, Boelmann et al. (2025) and Blau et al. (2013) show that individuals adapt to more egalitarian environments, while Nicoletti et al. (2018) highlights the importance of family peer networks in shaping female labor supply. Experimental evidence also supports the role of perceived social expectations: Bursztyn et al. (2020) and Bernhardt et al. (2018) show that social sanctions and misperceptions can constrain work decisions among women, whereas Fernández et al. (2004) emphasizes the role of intergenerational transmission.

Together, this literature establishes that historical institutions and cultural practices can shape women's economic roles, but provides less evidence on how these roles are subsequently treated within households.

Our conceptual framework distinguishes between inherited gender norms that shape women's lifetime economic roles and the social processes through which these roles are evaluated and enforced within households and kin networks. Based on this framework, We first study the association between inherited gender norms and women's lifetime attachment to market work in India. Next, we study whether the later-life consequences of lifetime non-participation vary systematically across ancestral normative environments, measuring these consequences through mistreatment within the household, financial support from relatives, and psychological well-being. Finally, we examine household decision-making and financial control to distinguish the role of economic resources from the role of social evaluation in shaping women's household standing.

Our findings point to a consistent pattern across two margins. First, inherited ancestral norms are associated with women's lifetime labor market attachment. In particular, women from ancestral settings that historically incorporated them into productive activities are less likely to remain outside the labor force over their lifetime. Second, conditional on never having worked, the consequences of this economic role differ across these same normative environments. Women from backgrounds where female economic participation was historically expected experience worse later-life outcomes, including greater reported mistreatment and poorer psychological well-being.

These differences may reflect two distinct channels: the economic resources associated with women's work and the social evaluation of their economic roles. We therefore examine whether the consequences of non-participation differ across these two dimensions of household standing. We find that financial control is closely tied to women's work history and does not vary systematically with ancestral norms, while household decision-making authority depends on whether their work history conforms to community expectations. In particular, lifetime non-participation is associated with lower decision-making authority when it departs from a community norm of female participation, but not when it conforms to a norm that women stay out of market work. From a policy perspective, these findings suggest that expanding women's economic opportunities can strengthen their household bargaining power through greater financial control, while gains in household decision-making also depend on whether women's economic roles conform to prevailing social expectations.

This paper contributes to the literature on gender norms and labor markets in several ways. First, we move beyond contemporaneous measures of labor supply and study women's complete non-participation in market work over the life course. This measure captures whether women adopted a market-work role over the course of their lives, rather than short-run variation in labor supply in response to wages or changing household constraints. Second, by focusing on older women whose labor market histories are largely complete, we are able to study the long-run consequences associated with these roles. Third, our results suggest that norms shape not only whether women adopt a particular economic role but also how that role is treated. Among women who never engaged in market work, the treatment they receive within the household and their psychological well-being vary across normative environments, and are worse where non-participation departs from inherited expectations. This suggests that norms may matter not only by discouraging particular behaviors, but also by shaping how different economic roles are valued and treated within households. Finally, by linking ancestral characteristics to later-life outcomes among aging women, we bridge the literature on the persistence of historical gender norms with work on household bargaining and social enforcement.

The remainder of the paper is organized as follows. In Section 2, we present a simple conceptual framework to guide the empirical specification. Section 3 describes our data, including LASI and ethnographic histories, and presents descriptive statistics. Section 4 describes our empirical framework, followed by results and mechanism analysis in Section 5. Finally, Section 6 concludes the analysis.

2 Conceptual Framework

Much of the existing research on gender disparities in labor markets focuses on labor supply at a single point in time. This work has been crucial in showing how gender norms influence women's economic behavior, especially around life events like marriage and childbirth. In contrast, lifetime non-participation from market work is more likely to reflect sustained patterns of economic behavior and is particularly informative in settings such as India, where gender roles are deeply embedded and socially enforced within families and kin networks. This perspective is also consistent with identity-based models in which norms assign socially appropriate roles and thereby shape persistent patterns of behavior over the life course (Akerlof & Kranton, 2000).

2.1 Gender Norms, Lifetime Non-Participation, and Social Enforcement

In our conceptual framework, following Cortés et al. (2026), we distinguish between two related but conceptually distinct aspects of gender norms: inherited norms and social enforcement of norms. Inherited norms refer to gender-role expectations transmitted across generations through ancestry, language, and cultural history. These norms shape beliefs about appropriate roles for women and are internalized through early socialization, identity, and preferences. Social enforcement of norms, on the other hand, refers to how these norms are evaluated and enforced in practice through interactions within households and kin networks, including approval, disapproval, and sanctions imposed by others.

Inherited norms influence whether women adopt particular lifetime labor market roles

early in life. Once a role is adopted, however, its consequences depend not only on the economic resources associated with that role but also on how that role is viewed and treated within the social group over time. Thus, a woman's lifetime work attachment may carry economic consequences through accumulated resources and outside options, while the same work history may also carry social consequences depending on whether it conforms to prevailing norms.

2.2 Lifetime Labor Market Attachment

Consider individual i who belongs to ancestral ethnolinguistic group g. We characterize a woman's lifetime labor force non-participation by the indicator N_i, defined as:

$$N_i = \begin{cases} 1 & \text{if the woman never worked over her lifetime,} \\ 0 & \text{if she worked at some point in her life.} \end{cases}$$

Following Cortés et al. (2026), we model the lifetime labor force non-participation decision as a threshold outcome that depends on economic incentives, lifecycle constraints, and inherited gender norms:

$$N_i = \mathbf{1}\left\{W_i - C_i - \phi_g A_g \leq 0\right\}. \tag{1}$$

Here, W_i captures the private returns to market work, reflecting the woman's education and skills, expected wages, taste for market work, and access to employment opportunities. C_i represents lifecycle constraints on participation, and may include caregiving responsibilities, household resources, health limitations, and mobility. The term A_g captures inherited gender norms regarding women's work in ancestral group g. One can interpret higher values of A_g as reflecting norms that are less supportive of women's participation in market work. The parameter $\phi_g \geq 0$ governs the strength with which these norms influence the decision to remain outside the labor force.

Although the outcome reflects a woman's lifetime work history, Equation 1 should be interpreted as a reduced-form representation of participation decisions made over the life course. The variables W_i and C_i therefore capture the cumulative influence

of expected returns and constraints that evolve over time. An immediate implication of this framework—one that we later examine empirically—is that ancestral norms are associated with the likelihood of lifetime non-participation in the labor market, consistent with empirical evidence on the persistence of historical and cultural norms (Alesina et al., 2013; Baranov et al., 2023).

2.3 Social Interactions and Norm Enforcement

The social environment in which a woman's realized lifetime work attachment is evaluated need not be identical to the ancestral environment that shaped her initial role adoption. In our empirical setting, however, strong endogamy implies that households and kin networks are largely formed within the same ethnolinguistic groups. We therefore use ancestral ethnolinguistic background as a proxy for the normative environment in which social enforcement takes place and denote it by s.

Gender roles are evaluated and reinforced within households and kin networks through approval, disapproval, sanctions, neglect, or mistreatment. Such responses may arise when a woman's behavior differs from what is expected in her community (Bernheim, 1994). Male backlash in response to women's labor market participation provides one example of such a social sanction.

Conditional on a woman's lifetime non-participation decision, N_i, we model later-life outcomes as:

$$Y_i = H_i - R_i(N_i) - \psi_{gs} \cdot L(N_i, S_{gs}) + \varepsilon_i. \tag{2}$$

where Y_i denotes later-life measures of well-being or household standing. H_i captures baseline well-being determined by health and resources. $R_i(N_i)$ captures the economic disadvantage associated with the realized lifetime work role, including differences in accumulated income, savings, and outside options. This does not depend directly on the normative environment. The term S_{gs} represents prevailing social norms regarding women's work for ancestral group g within social environment s. The function $L(\cdot)$ captures the social loss arising when a realized role is devalued or opposed within the household or kin

network, or is experienced as a cost by the woman herself where she has internalized prevailing expectations. The parameter $\psi_{gs} \geq 0$ measures the strength of norm enforcement. The error term ε_i captures idiosyncratic shocks.

The social loss $L(\cdot)$ increases with the extent to which a woman's realized lifetime work role departs from prevailing gender-role expectations, while ψ_{gs} captures the strength with which such departures translate into outcomes. The same lifetime work history may therefore carry different social consequences across ancestral normative environments.

This framework generates a clear empirical prediction. If lifetime non-participation matters primarily through accumulated resources and outside options, its association with later-life outcomes should not systematically depend on the prevailing normative environment. In contrast, if social evaluation also matters, the association between lifetime non-participation and later-life outcomes should vary across normative environments, particularly when the realized work role departs from prevailing expectations. Our empirical analysis examines this prediction using later-life measures of mistreatment, financial support, and mental health. We subsequently examine household decision-making and financial control to investigate the potential mechanisms underlying these relationships.

3 Data

We leverage two sources of data for the analysis. The first is Wave 1 (2017–2018) of the Longitudinal Ageing Study of India (LASI) that gives us information on lifetime labor supply and long-run socioeconomic and psychological outcomes of individuals above the age of 45 in India. We combine this data with ethnolinguistic information from Giuliano and Nunn (2018), which is based on the Ethnographic Atlas, a worldwide ethnicity-level database constructed by George Peter Murdock that contains ethnographic information on the pre-industrial characteristics of 1,265 ethnic groups. The Ethnographic Atlas is a widely used dataset in the literature, including studies on economic history, culture, and economic development (Alesina et al., 2013; Michalopoulos and Papaioannou, 2013; Michalopoulos et al., 2019).

The ethnographic dataset includes 7,510 language groups worldwide, mapped to ethnographic variables described in the Ethnographic Atlas. These ancestral characteristics include information on subsistence dependence, modes of production, jurisdictional hierarchy, and marital, residential, and kinship patterns, and related characteristics. The dataset identifies 313 languages spoken in India and maps the corresponding ethnic traits to the populations that speak them. We use this data to map pre-industrial ancestral traits to the languages and dialects spoken by current populations in the LASI data. The underlying data and the data construction process are described in detail below.

3.1 Dataset Construction

The Giuliano and Nunn (2018) ethnolinguistic data assign each language an ISO 639-3 code, which is matched to geopolitical boundaries at the country level.[2] While the dataset provides the latitude and longitude of the area in which a language is spoken, this information is available only at coarse, degree-level precision. A direct spatial mapping using these coordinates is therefore not feasible in our case, as LASI does not provide geocoded data. In addition, respondents may have migrated from the areas with which their historical dialect or language is associated. Taken together, these limitations lead us to rely on a mapping based on respondents' mother tongue.

LASI collects information on the mother tongue of each individual from a list of 19 mainstream languages spoken in the country.[3] In addition, the survey provides respondents with the option to report a specific mother tongue if they do not identify with any of the mainstream languages listed. This feature offers a unique advantage for our analysis. In the data, approximately 15 percent of respondents report a specific mother tongue.

However, this portion of the data exhibits substantial variation in data entry, rendering the matching process non-trivial. For example, the language Chhattisgarhi appears in more than 30 distinct variants. We therefore manually standardized these entries,

[2]ISO 639-3 is a three-letter code uniquely identifying languages. See Giuliano and Nunn (2018) for a detailed description of the construction of these data.

[3]The 19 languages are Assamese, Bengali, Gujarati, Hindi, Kannada, Kashmiri, Konkani, Malayalam, Manipuri, Marathi, Nepali, Oriya, Punjabi, Rajasthani, Sindhi, Tamil, Telugu, Urdu, and English.

ultimately identifying approximately 130 unique dialects or languages for roughly 11,000 respondents. Many of these entries correspond to dialects or alternative names of a primary language. To identify the appropriate unique identifier for each language, we relied on the Ethnologue database and its language index.[4] For each variant, we identified the ISO 639-3 code and mapped it to the primary language to which the language or dialect belongs.[5]

Once we identified the primary language and its unique ISO code, we merged the Giuliano and Nunn (2018) data with the LASI individual and household rosters. This process yields a match rate of 98.99 percent, allowing us to identify 110 unique language groups and their associated ancestral characteristics.[6] Figure 1 and Figure 2 show the diversity of these languages across states and districts in India.[7]

3.2 LASI: Outcome and Control Variables

The LASI is a nationally representative survey of 73,396 individuals aged 45 and above, covering all states and union territories of India. The survey investigates the health, economic, and social determinants and consequences of population aging in India. LASI is internationally harmonized with the Health and Retirement Study (HRS), and its main objective is to provide comprehensive scientific evidence on demographics, household economic status, physical and mental health, biomarkers, health insurance and healthcare utilization. The data also provide detailed information on family and social networks, social welfare programs, work and employment, retirement, life satisfaction, and measures

[4]Ethnologue provides a comprehensive listing of the world's known living languages. The language index documents over 55,000 distinct names used for languages and their dialects and indicates the country in which each name is used. It also provides information on primary languages, alternative names, dialects, and alternative dialect names. Read more here: Ethnologue Database.

[5]For example, the language Kok Borok has nine alternate names, three dialects, and one dialect alternate, all of which are mapped to the unique ISO 639-3 code 'trp'.

[6]We are unable to match 740 respondents because we could not identify their primary language or their reported mother tongue due to data entry issues. In addition, we were unable to match respondents who reported English as their mother tongue. There are eight observations reporting Bantawa or Rai (BAP) (six), Gurung (GVR), and Bishnupriya (BPY) (one each). While these languages are not identified within India, BAP and GVR are associated with Nepal and BPY with Bangladesh. We retain these observations, as most of these respondents report birth districts in the North Eastern states of India, and we reasonably presume that the cultural transmission of ethnic traits is similar across this region.

[7]The figure depicting diversity across districts is available only for 294 districts. This is because LASI does not provide survey district identifiers directly, and the district matching is done manually.

of mental health. We restrict the sample to women and, after mapping with ethnographic data, the final sample includes 41,847 female respondents.

The primary outcome of interest is the individual's lifetime labor supply decision. LASI identifies individuals who did not work for a minimum of three months at any point in their lives. The definition of work includes agricultural work, wage employment, self-employed activities, and unpaid work in family businesses. It covers all forms of labor, excluding one's own housework, regardless of whether wages were earned. We refer to this measure as "Never Worked", which can be interpreted as lifetime non-participation in productive economic activity. The variable Never Worked takes the value one if the respondent did not work for at least three months at any point in her life and zero otherwise. Descriptive statistics reported in Panel A of Table 1 show that 49 percent of women in the sample have never worked.

A potential concern is that recall error may arise when older women report their lifetime work histories. However, the binary nature of the Never Worked indicator reduces precision demands on recall compared to questions regarding the duration or intensity of work. Figure 3 shows that the rate of lifetime non-participation remains stable across prime older cohorts; the absence of a steep upward gradient among the oldest women indicates that recall error is not a primary concern in our setting. Further, the observed variation in Never Worked status exhibits strong face validity by aligning closely with established socioeconomic and cultural divisions in India. Muslim and Sikh women show higher Never Worked rates than Hindu women, consistent with documented differences in cultural norms around female purdah and economic activity (Kar, 2025). Southern states, where female labor force participation has historically been higher due to distinct kinship structures and agricultural systems (Dyson & Moore, 1983) show lower Never Worked rates than northern states. Labor market non-participation also follows the caste hierarchy, with Scheduled Caste and Scheduled Tribe women being substantially more economically engaged compared to other groups, consistent with ritual purity norms (Jayachandran, 2021). Finally, Figure 4 shows that the primary reported reason for never working is domestic homemaking rather than involuntary unemployment or health-

related incapacity, providing descriptive evidence that our measure captures adherence to traditional domestic roles rather than structural labor market exclusion.

To assess social status, the survey asks whether respondents experienced any form of ill-treatment in the past year, including physical abuse, verbal or disrespectful treatment, economic exploitation, emotional or psychological abuse, or neglect. The outcome variable "Ill Treated" is a binary indicator equal to one if the respondent reports any form of ill-treatment and zero otherwise. In the sample, 3.9 percent of women report experiencing ill-treatment.

The family and social networks module provides information on social support received and provided by individuals. We define economic security as whether the respondent received financial support. LASI defines financial support as receiving money, assistance with bill payments, or payment of specific expenses such as medical care or insurance, education, family marriages, religious events, down payments for housing purchases, and rent, excluding costs shared for housing and food. In the sample, 14.3 percent of women report economic dependence on relatives.[8]

Psychological well-being is assessed using the Composite International Diagnostic Interview (CIDI) module. Respondents are asked whether they experienced depression for two consecutive weeks or more during the past year. We construct a binary indicator, "Depression", which equals one if the respondent reports depressive symptoms. Descriptive statistics indicate that 17 percent of women report depression in our sample. We also measure Current Living Satisfaction, the respondent's reported satisfaction with her current living arrangement.[9]

Panel B of Table 1 reports descriptive statistics for the control variables used in our empirical analysis. More than half of the women in the sample are aged between 40 and 60, and approximately 69 percent are currently married. The distribution across MPCE quintiles is relatively even, with about 20 percent of respondents in each quintile. Around three-quarters of the sample identify as Hindu and 12 percent as Muslim. The majority

[8]Financial support includes monetary support for which the annual amount exceeds Rs.1,000.

[9]We reverse the scale so that higher values indicate greater satisfaction and standardize it to mean zero and unit standard deviation in the full LASI sample of men and women.

of respondents reside in rural areas (64 percent), and about 78 percent of households are male-headed. In terms of educational attainment, 56.8 percent of women report no formal schooling, 16.6 percent have completed 5–8 years of schooling, and only about 3.7 percent have attained higher education.

3.3 Ethnic Traits

We classify ancestral characteristics into two categories: economic characteristics and marriage and family norms. Economic characteristics are further classified into two components: gender-equal division of production activities and modes and intensity of agricultural production.

Murdock's Ethnographic Atlas documents how actively each sex contributed to a production activity. Gender-equal division of production activities refers to societies in which women were actively engaged in production and contributed economic resources to the household. Such societies exhibit a more gender-equal division of labor, as women were historically involved in the production process. For each production activity, gender participation is classified into five categories: males only; males appreciably more; equal participation; females appreciably more; and females only. We construct an indicator variable equal to one if gender participation was equal, if women contributed more than men, or if women were the sole participants in the activity, and zero otherwise. Table 2 shows that 32 percent of the ancestral population exhibited gender-equal division of labor in fishing, 25 percent in animal husbandry, and 33 percent in weaving. Descriptive statistics also indicate that 23 percent and 24 percent of the population exhibited gender-equal participation in agriculture and pottery, respectively.

With respect to modes and intensity of agricultural production, we examine whether societies historically practiced plough cultivation and intensive agriculture. Alesina et al. (2013) show that descendants of populations that practiced plough agriculture prior to industrialization are characterized by more unequal gender norms today, suggesting long-run persistence of gendered production roles. We find that a large majority of the ancestral population, approximately 90 percent and 87 percent, engaged in plough

cultivation and intensive agriculture, respectively.[10]

The second category of ancestral traits captures marriage and family norms, including whether societies practiced bride price, patrilocal or virilocal residence, polygyny, and endogamy and a family pattern of patrilineal descent and stem family system. In our sample, 32 percent of ancestors practiced bride price, a system involving monetary or in-kind payments to the bride's family at marriage. Approximately 89 percent of ancestors followed a virilocal or patrilocal residence system, in which the wife moves to the husband's household after marriage. Only 11 percent of the population exhibits the ancestral trait of endogamy, defined as the custom of marrying exclusively within a specific ethnic or social group. Summary statistics further show that polygyny, a form of plural marriage in which a man is permitted to have multiple wives, is observed for approximately 91 percent of the ancestral population.[11]

The conceptual framework assumes that the normative environment governing social evaluation largely reflects inherited ancestral characteristics. This assumption is particularly plausible in settings with strong marital endogamy, where spouses share similar cultural backgrounds. Moorjani et al. (2013) document that extensive population admixture occurred across the subcontinent between roughly 4200 and 1900 years ago, followed by a marked shift toward endogamy, coinciding with the consolidation of caste-based social stratification in post-Vedic India. To assess the extent of such sorting in our data, we examine the degree of concordance in ancestral characteristics within married couples. We are able to match 24,263 currently married women to their spouses in the LASI data.[12] We report Cohen's kappa, which measures the agreement between two variables, after removing the agreement that would occur purely by chance.[13] The statistics reported in Table A2 show that assortative mating exists and that marriages are nearly endoga-

[10] A detailed description of the construction of these ancestral characteristics is provided in the supplementary material.

[11] This is consistent with Alesina et al. (2021) where 98 percent of the ancestral population practiced polygyny in Africa.

[12] We have only considered women who reported a single spouse.

[13] Cohen's kappa (κ) is defined as:

$$\kappa = \frac{P_o - P_e}{1 - P_e}$$

where P_o is the observed agreement and P_e shows the expected agreement by chance.

mous. The kappa coefficients range from 0.94 to 0.97, indicating near-perfect agreement in cultural characteristics.

In our sample, nearly half of the ancestral population followed a patrilineal system of descent, and 32 percent practiced a stem family system. The stem family system refers to a small extended family arrangement in which two generations cohabit within the same homestead, with one son remaining in the parental household with his wife and children.

4 Empirical Methodology

To study the role of inherited gender norms in shaping women's lifetime labor market attachment, we estimate the following specification:

$$N_{igs} = \alpha + \beta\, A_g + \gamma\, X_{igs} + \delta_s + u_{igs} \tag{3}$$

where N_{igs} is Never Worked, denoting the lifetime non-market participation for woman i belonging to ethnolinguistic group g and residing in state s. A_g denotes the ancestral characteristic of interest associated with ethnolinguistic group g. X_{igs} is a vector of individual-level controls, including age group, current marital status, religion, rural/urban residence, educational attainment, household wealth quintile, and the sex of the household head. δ_s represents state fixed effects, and u_{igs} is the error term. We cluster standard errors at the ethnolinguistic group level.[14]

Ancestral norms may shape both women's lifetime labor market attachment and the later-life consequences associated with their realized work histories. As discussed in Section 2, these consequences may reflect both the economic resources associated with lifetime work attachment and the way women's roles are evaluated within their social environments. To examine whether the association between lifetime non-participation and later-life outcomes varies across ancestral normative environments, we estimate a reduced-form specification that interacts lifetime non-participation with ancestral characteristics.

[14]Our results are also robust to two-way clustering by ethnolinguistic group and primary sampling unit. Refer to Section 5.4.

Specifically, we estimate:

$$Y_{igs} = \phi + \nu N_i + \lambda A_g + \eta(N_i \times A_g) + X_i'\zeta + \delta_s + u_{igs} \tag{4}$$

where A_g captures the inherited (ancestral) normative environment and X_i includes controls for individual and household characteristics. Y_i denotes later-life outcomes and includes (i) mistreatment by a member of the household or kin, (ii) whether the elderly woman receives financial support from members of the household, and (iii) measures of mental health.

In this specification, λ captures differences in outcomes associated with inherited norms, ν captures the association between lifetime non-participation and later-life well-being, and η captures whether the association between lifetime non-participation and later-life outcomes varies across normative environments.

A potential concern is that lifetime non-participation may be correlated with unobserved individual characteristics. For example, even within groups characterized by conservative ancestral norms, women with greater agency or determination may be more likely to engage in market work, and the same unobserved traits could also affect long-run outcomes such as economic dependence and mental health.

Several features of our setting mitigate this concern. First, lifetime non-participation reflects decisions made earlier in life, often under parental or marital authority, rather than contemporaneous optimization based on individual-specific factors. Second, outcomes are measured in later adulthood, long after labor market roles were realized, ruling out reverse causality. We also report specifications with birth-district fixed effects, which absorb persistent local conditions correlated with both labor market opportunities and social environments. Moreover, our primary coefficient of interest exploits differential associations between the same lifetime role and later-life outcomes across inherited normative environments, which is less sensitive to individual-level unobservables unless such traits vary systematically with ancestry within birth districts. We also address this concern directly by comparing never-working women across normative environments on predetermined characteristics (Table A9), and by computing coefficient-stability bounds

(Table A10).[15]

5 Results

5.1 Norms and Lifetime Labor Market Non-Participation

We first study the relation between norms and lifetime labor market decisions as shown in Equation 3. Tables 3 to 5 report the correlates of inherited ancestral characteristics and women's lifetime labor market participation.

Table 3 examines the relation between gender-equal production activities and women's lifetime labor market participation. We find negative and statistically significant coefficients for gender-equal participation in agriculture (7.8 percentage points (pp)) and weaving (9 pp). These estimates indicate that women whose ancestors practiced more egalitarian production processes in these activities are less likely to have remained outside the labor market. Weaving represents a home-based and skill-transmitting activity compatible with female labor. These patterns are consistent with the persistence of more egalitarian production norms and their association with higher female labor market participation.

Table 4 reports the correlation between modes of agricultural production and women's lifetime labor market participation. Specifically, we examine plough cultivation and intensive agriculture. Consistent with prior research (Alesina et al., 2013), we expect positive coefficients on these variables, as plough-based production systems are typically associated with norms less conducive to female labor force participation. The estimated coefficients are positive for both plough cultivation and intensive agriculture, with plough cultivation only marginally significant. This likely reflects the limited cross-ethnic variation in these variables within our sample, as shown earlier.

Table 5 presents the correlates of marriage norms and lifetime entry into the labor market. We find that women who are descendants of populations that practiced bride price are 4.6 pp less likely to experience lifetime labor market non-participation. A poten-

[15] Refer to Section 5.4.

tial explanation is that bride price has historically been interpreted as a payment made by the husband's family in recognition of a woman's labor and reproductive capabilities, thereby explicitly acknowledging women's economic value (S. Anderson, 2007). Women who inherit such norms are plausibly more likely to participate in the labor force.

We do not find statistically significant effects for virilocal residence or polygyny. By contrast, women from communities that practiced endogamous marriage are more likely to engage in labor market activities. The estimates indicate a 7.3 pp reduction in the probability of never having worked for these women, significant at the 10 percent level. Although some studies show that endogamous communities tend to follow more conservative social norms that restrict women's outside employment (Righetto, 2023), such restrictions need not imply economic inactivity. Endogamous communities are often closely knit and characterized by strong links between family identity and production. In these contexts, women's work within family enterprises and agricultural production may be expected.

In Column (5), we show that women who inherit patrilineal descent norms are 5.7 pp more likely to have worked at some point in their lives. In hierarchically structured environments, economic production is often organized at the household level. Thus, while decision-making authority remains largely male-dominated within patrilineal inheritance systems, women's productive contributions may be expected in agricultural and family-based activities.

Finally, women whose ancestors followed a stem-family organization are 6.4 pp more likely to have never worked. This finding differs from evidence from Spain, where Tur-Prats (2019, 2021) shows higher female labor force participation in historically stem-family-dominated regions. In that context, co-residence with an older woman may free younger wives from certain domestic responsibilities, thereby enabling greater engagement in economically productive activities. However, in the Indian context, where hierarchical family structures may be stronger, this mechanism may operate differently. Domestic responsibilities may instead be primarily allocated to younger women, while older women gradually withdraw from active household work, thereby limiting younger

women's participation in market activities.

The results thus far suggest that inherited normative environments are closely linked to women's lifetime labor market attachment. In particular, ancestral settings that historically valued female participation in productive activities—such as gender-equal production processes and bride price marriage regimes—are associated with a lower likelihood of lifetime non-participation. These patterns are consistent with inherited role structures being associated with the extensive margin of women's economic engagement by embedding female labor within household and family production systems. By contrast, environments characterized by more hierarchical household structures—such as stem-family systems—tend to exhibit higher rates of lifetime non-participation, in line with norms that place greater emphasis on women's domestic roles relative to market-oriented work.

5.2 Norm Enforcement and Later-Life Outcomes

We next examine whether the association between lifetime non-participation and later-life outcomes varies across inherited ancestral environments. Table 6 shows that, on average, women who never worked report lower levels of ill-treatment. The interaction estimates, however, reveal important heterogeneity across ancestral production systems. Women who never worked and belong to communities with historically gender-equal agricultural production are 1.1 percentage points more likely to report ill-treatment, with the interaction significant at the 10 percent level. Thus, although never-working women report lower ill-treatment on average, this association is less favorable in ancestral environments historically associated with greater female productive participation.

Women from agricultural and weaving communities who never worked report lower current living satisfaction, by 0.11 SD and 0.09 SD, respectively. In contrast, women from pottery communities report higher living satisfaction (0.09 SD), while no significant interaction effects are observed for depression.

Table 7 shows that women who never worked in communities with a history of plough cultivation or intensive agriculture report lower levels of ill-treatment, with reductions of

approximately 2 percentage points. The interaction estimates are statistically significant, but we find no robust interaction effects for other later-life outcomes in these production systems.

Table 8 examines how ancestral marriage norms shape later-life outcomes for women who never worked. Women from communities with a historical practice of bride price are 1.1 pp more likely to report ill-treatment in later life if they never worked, significant at the 10 percent level. This finding is consistent with the possibility that lifetime non-participation carries different social consequences across ancestral marriage systems. We find no significant interaction effects for financial support or depression.

Women who never worked in communities with a history of virilocal residence report 2.4 percentage points more depression and 1.7 percentage points more ill-treatment, and are 3.7 percentage points less likely to receive financial support. For polygyny, never-working women report 0.10 SD higher current living satisfaction.

Among endogamous communities, the interaction between never having worked and endogamy is associated with a 0.12 SD reduction in current living satisfaction. This finding is consistent with heterogeneity in the later-life outcomes associated with lifetime non-participation across ancestral marriage systems.

In patrilineal communities, women who never worked are 1.4 percentage points more likely to report ill-treatment, significant at the 1 percent level. We find no significant interaction effects for financial support or psychological well-being.

In stem-family systems, women who never worked report 2.8 percentage points fewer depressive symptoms, significant at the 1 percent level. We find no significant interaction effects for ill-treatment, financial support, or current living satisfaction.

Overall, the results reveal considerable heterogeneity in the association between lifetime non-participation and later-life outcomes across ancestral environments. Women who never worked in communities historically associated with greater female productive participation report more ill-treatment and lower current living satisfaction for some ancestral traits, although the patterns vary across outcomes and traits. These findings are consistent with the argument that the consequences of lifetime non-participation depend

partly on the normative environment in which women's work histories are evaluated.

5.3 Mechanism Analysis

We next examine two potential explanations for the heterogeneous associations between lifetime non-participation and later-life outcomes documented in Section 5.2. The first is a resource-based explanation: women who never work may accumulate fewer independent resources and have weaker outside options within the household (Lundberg & Pollak, 1993, 1996; Manser & Brown, 1980; McElroy & Horney, 1981). The second is a social-sanction explanation: women may face penalties when their work histories depart from prevailing community expectations (Bernheim, 1994).

These mechanisms generate different predictions about how the association between lifetime non-participation and later-life outcomes should vary with community norms. If resource constraints are the primary mechanism, the consequences of non-participation should be broadly similar across women, regardless of the prevailing norms in their community. In contrast, if cultural sanctions are important, the consequences should depend on the relation between a woman's behavior and the norm governing her community: non-participation should be particularly consequential when it departs from what is locally considered appropriate behavior.

The distinction therefore provides a testable implication. We exploit variation in ancestral norms to examine whether the association between lifetime non-participation and later-life outcomes depends on the extent to which non-work conforms to or violates the prevailing norm in a woman's community.

We first examine two sources of heterogeneity that plausibly alter the strength of social monitoring without directly determining a woman's accumulated resources: urban residence and living arrangements. We distinguish women living only with their spouse from those living with a wider kin network. If social sanctions arise through the observation and enforcement of community norms, the penalty associated with non-work should be smaller when the relevant social audience is weaker or less proximate. In contrast, a resource-based mechanism does not, by itself, predict such heterogeneity: the loss of in-

dependent income or an outside option associated with lifetime non-participation should not depend on who observes a woman's behavior.

Figures 5 and 6 provide evidence consistent with this prediction. The estimated penalty associated with lifetime non-participation is smaller among women living in urban areas and among women living only with their spouse. This pattern suggests that the consequences of non-participation depend partly on the social environment in which women's behavior is observed and evaluated, consistent with social evaluation of women's roles operating alongside the resource channel.

We next test this mechanism more directly by asking whether the consequences of non-participation depend on whether it conforms to the dominant expectation of a woman's ancestral community. We do so using two measures constructed from the intra-household decision-making module of LASI.

The first is the Decision Participation Index. Following Agarwal (1997) and Dyson and Moore (1983), we construct a binary indicator equal to one if the respondent reports having an active voice—deciding alone or jointly—in each of five domains: children's marriage, property transactions, gifts to kin, children's education, and social or religious ceremonies. The index is the unweighted average of these five indicators and is therefore normalized to $[0, 1]$.[16] These decisions generally involve the wider household and kin network and therefore provide a measure of household standing that may reflect the extent to which a woman's role is recognized as legitimate within her social environment.

The second is a binary indicator, Financial Control, constructed from women's reported involvement in day-to-day household expenditure and financial matters. Following Lundberg and Pollak (1993) and Pahl (1983, 1990), this measure captures a dimension of intra-household control more directly related to access to and allocation of financial resources. It therefore provides a closer empirical counterpart to the resource mechanism emphasized in models of household bargaining.

If lifetime non-participation matters primarily because it limits women's accumulated resources and outside options, its association with both measures should be relatively in-

[16]The five components exhibit strong internal consistency, with a Cronbach's alpha of $\alpha = 0.8886$.

sensitive to the prevailing cultural environment. If, in addition, non-participation carries a social sanction when it departs from prevailing expectations, the association should be stronger for household decision-making—where social standing is more likely to matter—and should vary systematically with the normative environment.

Classifying ancestral traits

Ancestral communities are characterized by multiple traits, which need not imply the same expectations about women's economic roles. For example, a community may combine gender-equal agricultural production with a bride price system. We therefore classify ancestral traits according to the direction in which they are associated with women's economic participation based on the existing literature. 'Norm-conforming traits' are traits associated with expectations of women's non-participation and include plough cultivation, intensive agriculture, patrilineal descent, endogamy, virilocal residence, polygyny, and stem-family organization. 'Norm-deviating traits' are traits associated with expectations of women's productive contributions and include gender-equal participation in fishing, animal husbandry, agriculture, weaving, and pottery, and bride price. We use the literature-based classification as our baseline because it identifies ancestral norms independently of their observed associations with lifetime non-participation in our sample. This avoids defining the normative categories using the outcome we seek to explain. As a sensitivity check, we also construct an alternative classification based on the sign and statistical significance of each trait's estimated association with lifetime non-participation. [17]

For each ethnolinguistic group g, we calculate the share of ancestral traits associated with expectations of women's non-participation, S_g^c, and the share associated with expectations of women's participation, S_g^d. We then use a majority rule to identify the dominant expectation in the community. Specifically, a community is classified as conforming-dominant if at least half of its observed traits are norm-conforming and less than half are

[17] Table A3 re-estimates the mechanism analysis, using fewer traits, based on the sign of their statistically significant association with Never Worked in Tables 6–8. The interaction for household decision-making keeps its sign but is smaller and less precisely estimated, while the results for Financial Control are unchanged.

norm-deviating. Conversely, a community is classified as deviating-dominant if at least half of its observed traits are norm-deviating and less than half are norm-conforming.[18] This classification identifies communities in which the ancestral traits provide an unambiguous prediction about the expected role of women. We define $\text{GroupType}_g = 1$ for conforming-dominant groups and $\text{GroupType}_g = 0$ for deviating-dominant groups.

This classification also allows us to distinguish the direction of norm deviation. Under-participation occurs when a woman never worked despite belonging to a community in which female productive participation is the dominant expectation. Over-participation occurs when a woman worked despite belonging to a community in which female non-participation is the dominant expectation. These two forms of deviation provide a useful test of the competing mechanisms. Under a resource-based mechanism, participation should, if anything, improve women's household position by generating earnings and strengthening their outside options. Under a cultural-sanction mechanism, however, participation that violates the community's prescribed role may carry a social penalty. The comparison therefore allows us to examine whether the consequences of women's economic behavior depend on whether that behavior conforms to prevailing community expectations.

Estimating equations

Does the non-work penalty depend on the community's expectation? We first estimate:

$$D_{igs} = \alpha + \beta_1 N_i + \beta_2 \text{GroupType}_g + \beta_3 \left(N_i \times \text{GroupType}_g\right) + X_i'\gamma + \delta_s + \varepsilon_{igs}. \tag{5}$$

Here, D_{igs} denotes either the Decision Participation Index or the Financial Control. N_i, as defined earlier, equals one if woman i never participated in market work, while GroupType_g equals one for communities in which non-participation is the dominant ancestral expectation and zero for communities in which participation is dominant. The

[18] A conforming-dominant community satisfies $S_g^c \geq 0.5$ and $S_g^d < 0.5$, while a deviating-dominant community satisfies $S_g^d \geq 0.5$ and $S_g^c < 0.5$. Groups for which both shares are at least one-half, or both are below one-half, are classified as ambiguous and excluded from the baseline analysis.

sample is restricted to communities with an unambiguous dominant expectation.

The coefficient β_1 measures the association between lifetime non-participation and the outcome among women whose communities expect female participation. The coefficient β_2 captures differences between the two types of communities that are unrelated to women's own work status. The interaction coefficient β_3 is the key parameter: it measures whether the association between lifetime non-participation and household standing differs when non-participation conforms to the dominant community expectation. A positive β_3 indicates that the association between non-participation and the outcome is less negative in communities where non-participation is normative, consistent with a social evaluation channel.

Does the direction of norm deviation matter? We next examine whether the direction of norm deviation matters. We construct indicators for under-participation and over-participation from N_i and the dominant community expectation:

$$D_{igs} = \alpha + \beta_4 \text{DeviateUnder}_i + \beta_5 \text{DeviateOver}_i + \beta_2' \text{GroupType}_g + X_i'\gamma + \delta_s + \varepsilon_{igs}. \quad (6)$$

Here, $\text{DeviateUnder}_i = 1$ when $N_i = 1$ and female participation is the dominant community expectation, while $\text{DeviateOver}_i = 1$ when $N_i = 0$ and female non-participation is the dominant expectation. Because the specification controls for GroupType_g, each coefficient is a comparison within the same type of community: β_4 compares women who never worked with women who worked in communities where participation is expected, and β_5 compares women who worked with women who never worked in communities where non-participation is expected.

The resource mechanism predicts that working should, if anything, improve household standing through greater resources and outside options. The cultural-sanction mechanism, however, predicts that working against a community's prescribed role may carry a social penalty. Comparing under- and over-participation therefore allows us to examine whether the consequences of women's economic behavior depend on the direction of norm deviation.

Continuous measure of ancestral norms. Finally, we replace the discrete community classification with continuous measures of ancestral traits:

$$D_{igs} = \alpha + \beta_6 N_i + \beta_7 \text{TraitShare}_g + \beta_8 \left(N_i \times \text{TraitShare}_g\right) + X_i'\gamma + \delta_s + \varepsilon_{igs}. \tag{7}$$

Here, TraitShare_g is alternatively defined as S_g^c or S_g^d. These specifications use the full sample and avoid imposing the 50% threshold required for the discrete classification. The interaction coefficient β_8 tests whether the association between lifetime non-participation and household standing varies continuously with the strength of the community's ancestral expectation.

Results

Table 9 reports the results from the three specifications distinguishing the two mechanisms: economic resources and social evaluation. Panel A estimates the fully saturated interaction model for communities with an unambiguous dominant expectation. In Column (1), lifetime non-participation is associated with a 3.7 percentage point decline in the Decision Participation Index among women in communities where female economic participation is the dominant expectation. The interaction between non-participation and the conforming regime is positive and statistically significant. The net association for women in conforming communities is close to zero (0.007), showing that never working is not associated with lower decision-making where non-participation is the norm. The pattern differs for Financial Control. Lifetime non-participation is associated with a 7.5 percentage point lower probability of financial control in communities where female participation is expected. While we find no statistically significant effect for the interaction term, the net association remains negative and statistically significant in conforming communities (-7.3 percentage points). Thus, financial control varies with women's work status but does not appear to vary with the prevailing ancestral norm. A joint test confirms that the interaction differs across the two outcomes: it is 0.20 standard deviations larger for decision-making than for financial control ($p = 0.041$).

Panel B examines whether the direction of norm deviation matters, comparing each

group with women whose behavior conforms to the dominant expectation in the same type of community. In Column (1), under-participation is associated with a 3.7 percentage point lower Decision Participation Index, while over-participation is associated with a difference of less than one percentage point. An F-test rejects equality of the two coefficients, indicating that the penalty falls mainly on women who did not work where work was expected. Column (2) shows the opposite pattern for Financial Control. Under-participation lowers financial control by 7.5 percentage points and over-participation raises it by 7.3 points, so working is associated with greater control over routine finances whatever the community norm. Over-participation is thus associated with greater financial control and, at most, a small reduction in decision-making.

Panel C replaces the discrete community classification with continuous measures of ancestral traits. The results for the Decision Participation Index are consistent with those in Panel A. The interaction between lifetime non-participation and the share of norm-conforming traits is positive and statistically significant, while the interaction with the share of norm-deviating traits is statistically insignificant. The association between lifetime non-participation and household decision-making therefore varies systematically with the strength of ancestral traits associated with women's non-participation. For Financial Control, neither interaction is statistically significant, indicating that the relation between lifetime non-participation and financial control does not vary systematically with the ancestral normative environment.

Together, these results point to two separate channels. Financial control is associated with women's actual work history: working raises it, and this holds even in communities where women are not expected to work. However, decision-making authority depends on whether a woman's work history matches what her community expected, and the penalty is concentrated among women who did not work where working was the prevailing norm.

5.4 Robustness Checks

We assess the robustness of our findings using several alternative specifications. First, as discussed in Section 4, local conditions during childhood may influence women's lifetime

labor market decisions. For the subset of 31,385 women who report their birth district, we include birth-district fixed effects to account for unobserved early-life local environments. The results are reported in Tables A4–A8 in the appendix. Overall, the estimates remain qualitatively similar to those from the baseline specification. The signs and magnitudes of the interaction coefficients are largely preserved across the later-life outcomes. While a few coefficients change statistical significance, these changes are primarily concentrated among estimates that were only marginally significant in the baseline specification and are consistent with the smaller estimation sample and the additional variation absorbed by the birth-district fixed effects. The interaction estimates related to gender-equal production activities are particularly stable across specifications, while results for marriage systems and family settlement patterns are somewhat more sensitive to the inclusion of birth-district fixed effects.

Next, because ancestral characteristics may correlate with social hierarchy, particularly in the Indian context, we extend our baseline specification to include controls for broad social categories (Scheduled Caste, Scheduled Tribe, Other Backward Class, and None of these). As shown in Column (3) of Tables A4–A8, our interaction estimates remain unchanged in sign and magnitude, suggesting that the baseline findings are not driven by differences across these broad social groups.

Third, we estimate specifications with alternative fixed effects by replacing state fixed effects with religion-by-state and residence-by-state fixed effects. The interaction estimates remain broadly stable.

Fourth, we estimate the models using two-way clustering by ethnolinguistic group and primary sampling unit. The statistical significance and magnitudes of the interaction coefficients remain similar to the baseline estimates and the inference is not sensitive to the choice of clustering level.

Fifth, we restrict the estimation sample to Hindu respondents, who constitute the majority of the LASI sample, and re-estimate the baseline specification. The interaction estimates are broadly consistent with those from the full-sample baseline. We also consider whether the baseline age-group and state fixed effects are sufficiently detailed

to capture cohort-specific conditions within states. To address this concern, we replace them with birth-year-by-state fixed effects, which provide a finer control for cohort-specific variation. Our results remain qualitatively similar to the baseline, suggesting that our findings are not driven by the use of relatively coarse age-group and state fixed effects.

Sixth, since ill-treatment, financial support, and depression are binary outcomes, we estimate Probit models as an alternative functional form. The Probit estimates are qualitatively consistent with the baseline linear probability models, with the direction and statistical significance of the principal interaction effects remaining broadly unchanged.

Next, we also account for the fact that we have several outcome variables and therefore adjust for multiple hypothesis testing. We report sharpened False Discovery Rate (FDR) q-values computed using the two-stage procedure of Benjamini et al. (2006), as implemented following M. L. Anderson (2008). The sharpened FDR procedure controls the proportion of false discoveries among all rejected hypotheses, rather than requiring that the probability of any single false rejection be kept below a threshold. Column (10) of Tables A4–A7 and Column (9) of Table A8 report the sharpened FDR q-values. While we lose significance for some baseline estimates that were only marginally significant, most of the results that were originally significant remain robust.

We address the concern of negative selection of women who never worked despite belonging to communities that expected female labor force participation. First, in Table A9, we compare never-working women in participation- and non-participation-dominant communities within states, on characteristics determined before or early in adult life. The two groups are similar in birth cohort, age at first marriage, self-reported childhood health, having been bedridden or having missed school because of illness during childhood, and the family's financial situation in childhood. Within states, never-working women from participation-dominant communities are less likely to have any schooling and more likely to belong to Scheduled Castes and Tribes, which reflects the ancestral composition of these communities. Column (4) directly tests whether the gap between never-working and working women differs across community types. While we find no difference for schooling or for any of the childhood health and family background measures, we find

that the caste and religious composition of never-working women relative to working women differs across community types. Religion is controlled for in all specifications, and our results are robust to controlling for social category. Second, never-working women from participation-dominant communities are more likely to report disability or illness as the reason for never working (3.8 against 1.1 percent). Our estimates are qualitatively similar when we exclude never-working women who report disability or illness.

Following Oster (2019), we also compute coefficient-stability bounds for every interaction that is significant in Tables 6–8 (Table A10, Panels A–D) and for the decision-making interactions in Table 9 (Panel E). For most interactions in Tables 6–8, the coefficient moves away from zero when individual controls are added, so no positive degree of proportional selection on unobservables would eliminate it. Where the controls move the coefficient toward zero, selection on unobservables would need to be between 3.4 and 150 times as strong as selection on observables under Oster's benchmark ($R_{max} = 1.3\tilde{R}^2$). Under the stricter $R_{max} = 2\tilde{R}^2$, all of these estimates remain robust except the interaction with intensive agriculture, whose bias-adjusted coefficient approaches zero. For Table 9, the required values are 32.1 (discrete classification) and 11.4 (continuous trait share) under the benchmark bound and 9.9 and 3.5 under the stricter bound. Together, these results suggest no bias du to selection into never-working.

6 Conclusion

A large literature documents the role of gender norms in shaping women's labor market outcomes, with a particular emphasis on how norms influence labor supply decisions at a point in time. We contribute to this literature by focusing on women's lifetime labor market attachment, which provides a more informative measure of persistent role assignment shaped by norms over the life course. Using data on older women in India, we combine individual work histories with ethnolinguistic measures of ancestral characteristics that capture historical gender-role structures, including subsistence patterns, the division of production, and marriage institutions. We develop a simple conceptual framework that

distinguishes between inherited norms that shape women's lifetime roles and the processes through which these roles are evaluated within households and kin networks. This distinction allows us to examine the relation between ancestral norms and lifetime non-participation, and whether the consequences associated with this non-participation role vary across normative environments.

Our results point to a consistent pattern across these two margins. Women from ancestral settings in which female participation in productive activities was historically more common are less likely to remain outside the labor force over their lifetime. At the same time, among women who never worked, those from such backgrounds experience less favorable later-life outcomes, including higher reported ill-treatment and poorer psychological well-being. This suggests that the consequences of non-participation depend on the expectations embedded in the surrounding normative environment. The mechanism analysis provides further evidence for this interpretation. While financial control is closely associated with women's work history and does not vary systematically with ancestral norms, household decision-making varies with whether women's economic behavior conforms to the expectations of their ancestral community. Taken together, these findings suggest that gender norms shape not only whether women work, but also how the roles they occupy are valued and translated into household standing.

A key implication of our study is that policies to increase female labor force participation must account for the normative context in which women's work is embedded (Moscona et al., 2026). Expanding labor market opportunities alone may be insufficient, as the social consequences of women's economic roles can vary across inherited normative environments. In settings where female work is historically expected, improving access to employment may be more readily compatible with prevailing social expectations. In more restrictive contexts, increased participation may instead represent a departure from established roles and may therefore be accompanied by social costs unless norms and intra-household conditions also change. This suggests that policies aimed at increasing female labor force participation may benefit from combining labor market interventions with norm-sensitive approaches, such as information campaigns and role models, along-

side measures that strengthen women's position within the household, including greater control over earnings, increased say in work and mobility decisions, and improved access to financial resources.

Statements and Declarations

Competing interests The authors have no competing interests to declare that are relevant to the content of this article.

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Data availability LASI Wave 1 data are available from the International Institute for Population Sciences (IIPS) on request. Ethnographic Atlas data are publicly available.

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Tables and Figures

Table 1: Summary Statistics: Outcome and Control Variables

Variables	Mean	SD	N
Panel A: Outcome Variables			
Never Worked	0.486	0.500	41,842
Ill Treated	0.039	0.194	40,911
Financial Support Received	0.143	0.350	41,283
Depression	0.172	0.378	41,146
Current Living Satisfaction	-0.022	1.001	41,065
Panel B: Control Variables			
Age Groups			
18–39	0.052	0.223	41,847
40–59	0.555	0.497	41,847
60–79	0.349	0.477	41,847
80–99	0.042	0.201	41,847
100+	0.001	0.029	41,847
Marital Status			
Currently married	0.686	0.464	41,847
Widowed	0.283	0.450	41,847
Divorced	0.004	0.061	41,847
Separated	0.007	0.083	41,847
Deserted	0.005	0.072	41,847
Live-in relationship	0.006	0.075	41,847
Never married	0.009	0.094	41,847
MPCE Quintile			
Poorest	0.197	0.398	41,847
Poorer	0.202	0.402	41,847
Middle	0.202	0.402	41,847
Richer	0.203	0.402	41,847
Richest	0.196	0.397	41,847
None	0.002	0.043	41,844
Religion			
Hindu	0.734	0.442	41,844
Muslim	0.121	0.326	41,844
Christian	0.096	0.294	41,844
Sikh	0.027	0.161	41,844
Buddhist / Neo-Buddhist	0.011	0.106	41,844
Jain	0.002	0.049	41,844
Jewish	0.000	0.008	41,844
Parsi / Zoroastrian	0.000	0.008	41,844
Others	0.006	0.080	41,844
Years of Education			
No schooling	0.568	0.495	41,846

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Variables	Mean	SD	N
1–4 years schooling	0.096	0.294	41,846
5–8 years schooling	0.166	0.372	41,846
9–12 years schooling	0.134	0.341	41,846
13–16 years schooling	0.027	0.162	41,846
17+ years schooling	0.010	0.099	41,846
Household Sex			
Male-headed	0.779	0.415	41,819
Female-headed	0.221	0.415	41,819
Region			
Rural	0.638	0.480	41,847
Urban	0.362	0.480	41,847

Notes: This table reports summary statistics for outcome and control variables used in the analysis. The sample is restricted to women

Table 2: Summary Statistics: Ethnic Traits

Variables	Mean	SD	N
Gender Equal Production			
Fishing	0.317	0.465	25,396
Animal Husbandry	0.247	0.431	39,056
Agriculture	0.232	0.422	40,776
Weaving	0.333	0.471	31,012
Pottery	0.236	0.424	32,181
Mode of Production			
Plough	0.905	0.294	40,778
Intensive agriculture	0.866	0.341	40,778
Marriage Norms			
Bride price	0.319	0.466	41,845
Virilocal	0.894	0.307	41,847
Polygyny	0.907	0.291	40,845
Endogamy	0.108	0.310	40,920
Patrilineal	0.479	0.500	41,847
Stem family	0.316	0.465	40,942

Notes: This table reports summary statistics for ethnic trait variables used in the analysis. The sample is restricted to women.

Table 3: Cultural Correlates of Never Worked: Gender Equal Participation

	Dependent variable: Never Worked				
	(1) Fishing	(2) Animal husbandry	(3) Agriculture	(4) Weaving	(5) Pottery
Ancestral trait	-0.002	-0.016	-0.078**	-0.091***	0.003
	(0.033)	(0.036)	(0.031)	(0.027)	(0.029)
Controls	✓	✓	✓	✓	✓
State FE	✓	✓	✓	✓	✓
Mean	0.471	0.497	0.487	0.494	0.476
R-squared	0.268	0.222	0.224	0.214	0.222
Clusters	80	77	94	69	44
Observations	25,375	39,023	40,741	30,986	32,159

Notes: The dependent variable is an indicator equal to one if the respondent has *never worked* at any point in her lifetime, as defined by the LASI. Each column reports results from a separate regression where the independent variable is an indicator for traditional gender-equal participation in the historical economic activity specified in the column header, matched via the Giuliano and Nunn (2018) ethnolinguistic database. All specifications include state fixed effects and individual-level controls: five age-group categories, marital status indicators, religion indicators, monthly per capita consumption expenditure (MPCE) wealth quintiles, a six-category educational attainment variable, an indicator for female household headship, and an urban/rural residence indicator. Variation in sample size across columns reflects differences in ancestral trait coverage across language groups in the ethnolinguistic database. Standard errors clustered at the ethnolinguistic group level are reported in parentheses. Mean denotes the unconditional mean of the dependent variable in each estimation sample. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 4: Cultural Correlates of Never Worked: Mode of Production

	Dependent variable: Never Worked	
	(1) Plough cultivation	(2) Intensive agriculture
Ancestral trait	0.068*	0.045
	(0.038)	(0.035)
Controls	✓	✓
State FE	✓	✓
Mean	0.487	0.487
R-squared	0.224	0.224
Clusters	95	95
Observations	40,743	40,743

Notes: The dependent variable is an indicator equal to one if the respondent has *never worked* at any point in her lifetime. Each column reports estimates from a separate OLS regression of the Never Worked indicator on the ancestral trait listed in the column header. Individual controls, state fixed effects, and clustering follow Table 3 exactly. The identical observation count across columns reflects that plough cultivation and intensive agriculture are recorded for the same set of language groups in the ethnolinguistic database. Mean denotes the unconditional mean of the dependent variable in the estimation sample. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 5: Cultural Correlates of Never Worked: Marriage and Family Norms

	Dependent variable: Never Worked					
	(1) Brideprice	(2) Virilocality	(3) Polygyny	(4) Endogamy	(5) Patrilineal	(6) Stem family
Ancestral trait	-0.046*	-0.005	0.041	-0.073*	-0.057***	0.064***
	(0.025)	(0.034)	(0.050)	(0.042)	(0.020)	(0.017)
Controls	✓	✓	✓	✓	✓	✓
State FE	✓	✓	✓	✓	✓	✓
Mean	0.486	0.486	0.485	0.486	0.486	0.486
R-squared	0.222	0.221	0.223	0.224	0.222	0.224
Clusters	106	107	95	99	107	101
Observations	41,808	41,810	40,811	40,885	41,810	40,907

Notes: The dependent variable is an indicator equal to one if the respondent has *never worked* at any point in her lifetime. Each column reports estimates from a separate OLS regression of the Never Worked indicator on the ancestral marriage or family norm listed in the column header. Individual controls, state fixed effects, and clustering follow Table 3 exactly. Variation in the number of observations across columns reflects differential coverage of marriage and family norm variables in the ethnolinguistic database. Brideprice denotes a norm of transferring goods or payments from the groom's family to the bride's family at marriage. Virilocality denotes a norm of post-marital residence with or near the husband's family. Polygyny denotes a norm permitting a man to have multiple wives simultaneously. Endogamy denotes a norm of marrying within one's own social group or community. Patrilineal descent denotes a norm of tracing kinship and inheritance through the male line. Stem family denotes a norm of co-residence across generations in a single household organised around the male heir. Mean denotes the unconditional mean of the dependent variable in the estimation sample. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table 6: OLS Regressions: Gender-Equal Production and Later-Life Outcomes

	Neglect	Economic Support	Psychological Well-Being	
	(1)	(2)	(3)	(4)
	Ill Treated	Financial Support Received	Depression	Current Living Satisfaction
Fishing				
Never Worked	-0.022***	-0.019**	-0.031**	0.092**
	(0.005)	(0.008)	(0.015)	(0.038)
Ancestral trait	-0.007	-0.036*	0.009	-0.020
	(0.008)	(0.021)	(0.014)	(0.036)
Never Worked × Ancestral trait	0.008	-0.006	-0.012	-0.093**
	(0.008)	(0.015)	(0.017)	(0.046)
Mean	0.035	0.145	0.150	-0.084
R-squared	0.031	0.057	0.044	0.108
Clusters	80	80	80	80
Observations	24,760	24,967	24,900	24,841
Animal husbandry				
Never Worked	-0.022***	-0.012	-0.045***	0.070**
	(0.004)	(0.011)	(0.011)	(0.027)
Ancestral trait	-0.011**	0.011	-0.043***	-0.037
	(0.004)	(0.011)	(0.016)	(0.030)
Never Worked × Ancestral trait	0.008	-0.015	0.001	-0.053
	(0.006)	(0.013)	(0.014)	(0.039)
Mean	0.040	0.140	0.176	-0.025
R-squared	0.030	0.053	0.047	0.116
Clusters	77	77	77	77
Observations	38,163	38,488	38,389	38,313
Agriculture				
Never Worked	-0.021***	-0.016	-0.048***	0.082***

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	Neglect	Economic Support	Psychological Well-Being	
	(1)	(2)	(3)	(4)
	Ill Treated	Financial Support Received	Depression	Current Living Satisfaction
	(0.004)	(0.010)	(0.011)	(0.027)
Ancestral trait	-0.008	0.012	-0.035**	0.054
	(0.005)	(0.014)	(0.017)	(0.045)
Never Worked × Ancestral trait	0.011*	-0.005	0.020	-0.114**
	(0.006)	(0.015)	(0.016)	(0.045)
Mean	0.039	0.141	0.171	-0.022
R-squared	0.030	0.055	0.050	0.115
Clusters	94	94	94	94
Observations	39,825	40,187	40,061	39,980
Weaving				
Never Worked	-0.019***	-0.015	-0.042**	0.063***
	(0.006)	(0.013)	(0.016)	(0.024)
Ancestral trait	-0.011**	-0.024	-0.037	-0.030
	(0.005)	(0.017)	(0.023)	(0.052)
Never Worked × Ancestral trait	0.007	-0.007	-0.002	-0.092**
	(0.007)	(0.015)	(0.021)	(0.043)
Mean	0.038	0.139	0.177	0.007
R-squared	0.027	0.061	0.054	0.118
Clusters	69	69	69	69
Observations	30,297	30,589	30,478	30,422
Pottery				
Never Worked	-0.016***	-0.017	-0.053***	0.025*
	(0.006)	(0.012)	(0.006)	(0.015)
Ancestral trait	0.003	-0.002	-0.035	-0.043
	(0.005)	(0.012)	(0.026)	(0.036)
Never Worked × Ancestral trait	-0.007	-0.003	0.028	0.088**

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	Neglect	Economic Support	Psychological Well-Being	
	(1)	(2)	(3)	(4)
	Ill Treated	Financial Support Received	Depression	Current Living Satisfaction
	(0.009)	(0.014)	(0.025)	(0.040)
Mean	0.038	0.134	0.180	-0.019
R-squared	0.027	0.061	0.049	0.126
Clusters	44	44	44	44
Observations	31,422	31,728	31,624	31,559

Notes: This table reports OLS regressions estimating the interaction between gender-equal participation in ancestral production activities and lifetime labor force non-participation on later-life outcomes among women in the LASI. Panel headers denote the ancestral trait. *Never Worked* is an indicator equal to one if the respondent has never worked in her lifetime. Dependent variables capture three domains of later-life outcomes: (1) *Ill Treated*, an indicator for experience of neglect or mistreatment; (2) *Financial Support Received*, an indicator for receiving economic or financial support; (3) *Depression*, an indicator for elevated depressive symptoms; and (4) *Current Living Satisfaction* (standardized). Individual controls, state fixed effects, and clustering follow Table 3 exactly. Mean denotes the unconditional mean of the dependent variable in the respective estimation sample. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 7: OLS Regressions: Mode of Production and Later-Life Outcomes

	Neglect	Economic Support	Psychological Well-Being	
	(1)	(2)	(3)	(4)
	Ill Treated	Financial Support Received	Depression	Current Living Satisfaction
Plough cultivation				
Never Worked	-0.003	-0.009	-0.036***	0.015
	(0.004)	(0.018)	(0.012)	(0.073)
Ancestral trait	0.023***	0.033	0.039*	-0.031
	(0.006)	(0.028)	(0.020)	(0.104)
Never Worked × Ancestral trait	-0.017***	-0.009	-0.009	0.047
	(0.005)	(0.019)	(0.015)	(0.076)
Mean	0.039	0.141	0.171	-0.022
R-squared	0.031	0.055	0.049	0.115
Clusters	95	95	95	95
Observations	39,827	40,189	40,063	39,982
Intensive agriculture				
Never Worked	-0.008*	-0.005	-0.025**	0.011
	(0.004)	(0.013)	(0.010)	(0.050)
Ancestral trait	0.014**	0.029	0.034**	-0.020
	(0.006)	(0.024)	(0.016)	(0.079)
Never Worked × Ancestral trait	-0.013**	-0.014	-0.022	0.053
	(0.006)	(0.015)	(0.014)	(0.054)
Mean	0.039	0.141	0.171	-0.022
R-squared	0.031	0.055	0.049	0.115
Clusters	95	95	95	95
Observations	39,827	40,189	40,063	39,982

Notes: This table reports OLS regressions estimating the interaction between ancestral modes of production and lifetime labor force non-participation on later-life outcomes among women in the LASI. Panel headers denote the ancestral trait. *Never Worked* is an indicator equal to one if the respondent has never worked in her lifetime. Dependent variables are as in Table 6. Individual controls, state fixed effects, and clustering follow Table 3 exactly. Mean denotes the unconditional mean of the dependent variable in the respective estimation sample. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 8: OLS Regressions: Marriage and Family Norms and Later-Life Outcomes

	Neglect	Economic Support	Psychological Well-Being	
	(1)	(2)	(3)	(4)
	Ill Treated	Financial Support Received	Depression	Current Living Satisfaction
Brideprice				
Never Worked	-0.022***	-0.015	-0.052***	0.078***
	(0.004)	(0.010)	(0.011)	(0.028)
Ancestral trait	-0.007	-0.001	-0.014	-0.016
	(0.006)	(0.012)	(0.016)	(0.034)
Never Worked × Ancestral trait	0.011*	-0.007	0.019	-0.077**
	(0.005)	(0.013)	(0.015)	(0.038)
Mean	0.039	0.143	0.172	-0.022
R-squared	0.030	0.056	0.049	0.113
Clusters	106	106	106	106
Observations	40,874	41,244	41,110	41,029
Virilocality				
Never Worked	-0.034***	0.016	-0.068***	0.106
	(0.008)	(0.018)	(0.008)	(0.099)
Ancestral trait	-0.003	-0.009	-0.004	-0.037
	(0.007)	(0.028)	(0.022)	(0.111)
Never Worked × Ancestral trait	0.017*	-0.037*	0.024**	-0.055
	(0.009)	(0.019)	(0.011)	(0.097)
Mean	0.039	0.143	0.172	-0.022
R-squared	0.030	0.056	0.049	0.113
Clusters	107	107	107	107
Observations	40,876	41,246	41,112	41,031
Polygyny				
Never Worked	-0.018***	-0.019	-0.052	-0.038

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	Neglect	Economic Support	Psychological Well-Being	
	(1)	(2)	(3)	(4)
	Ill Treated	Financial Support Received	Depression	Current Living Satisfaction
	(0.004)	(0.018)	(0.034)	(0.036)
Ancestral trait	-0.006	0.015	-0.021	-0.122*
	(0.006)	(0.024)	(0.019)	(0.070)
Never Worked × Ancestral trait	-0.001	0.002	0.008	0.104***
	(0.005)	(0.019)	(0.035)	(0.039)
Mean	0.039	0.141	0.171	-0.021
R-squared	0.030	0.055	0.049	0.115
Clusters	95	95	95	95
Observations	39,896	40,262	40,131	40,051
Endogamy				
Never Worked	-0.019***	-0.017**	-0.043***	0.070***
	(0.004)	(0.008)	(0.010)	(0.024)
Ancestral trait	-0.005	-0.031*	0.042	0.148**
	(0.007)	(0.019)	(0.027)	(0.070)
Never Worked × Ancestral trait	0.006	0.002	-0.009	-0.126***
	(0.006)	(0.016)	(0.033)	(0.044)
Mean	0.039	0.141	0.171	-0.021
R-squared	0.030	0.055	0.050	0.115
Clusters	99	99	99	99
Observations	39,969	40,331	40,205	40,124
Patrilineal				
Never Worked	-0.025***	-0.021***	-0.048***	0.076**
	(0.003)	(0.006)	(0.013)	(0.034)
Ancestral trait	-0.009*	-0.019	-0.023	-0.003
	(0.005)	(0.012)	(0.015)	(0.042)
Never Worked × Ancestral trait	0.014***	0.008	0.004	-0.045

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	Neglect	Economic Support	Psychological Well-Being	
	(1)	(2)	(3)	(4)
	Ill Treated	Financial Support Received	Depression	Current Living Satisfaction
	(0.005)	(0.013)	(0.015)	(0.037)
Mean	0.039	0.143	0.172	-0.022
R-squared	0.030	0.056	0.049	0.113
Clusters	107	107	107	107
Observations	40,876	41,246	41,112	41,031
Stem family				
Never Worked	-0.017***	-0.012	-0.035***	0.058**
	(0.005)	(0.010)	(0.010)	(0.029)
Ancestral trait	0.003	0.021	0.031**	0.038
	(0.003)	(0.016)	(0.012)	(0.040)
Never Worked × Ancestral trait	-0.006	-0.014	-0.028***	-0.007
	(0.005)	(0.010)	(0.010)	(0.033)
Mean	0.038	0.141	0.171	-0.021
R-squared	0.030	0.055	0.050	0.114
Clusters	101	101	101	101
Observations	39,991	40,353	40,227	40,146

Notes: This table reports OLS regressions estimating the interaction between ancestral marriage and family norms and lifetime labor force non-participation on later-life outcomes among women in the LASI. Panel headers denote the ancestral trait. *Never Worked* is an indicator equal to one if the respondent has never worked in her lifetime. Dependent variables are as in Table 6. Individual controls, state fixed effects, and clustering follow Table 3 exactly. Mean denotes the unconditional mean of the dependent variable in the respective estimation sample. Polygyny is absent for only 7 ethnolinguistic groups. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 9: Mechanism Analysis: Intra-Household Authority, Norm Alignment, and Resource Command

Explanatory Variable	Decision Participation Index (1)	Financial Control (2)
Panel A: Interaction Model		
Never Worked	−0.0374**	−0.0747**
	(0.0175)	(0.0363)
	{0.022}	{0.098}
Conforming Dominant (GroupType$_g = 1$)	0.0096	−0.0259
	(0.0110)	(0.0271)
Never Worked × Conforming Dominant	0.0441**	0.0012
	(0.0174)	(0.0365)
	{0.003}	{0.974}
Net Effect ($\beta_1 + \beta_3$)	0.0067***	−0.0734***
	[0.002]	[0.000]
	{0.066}	{0.016}
Clusters	58	58
Observations	27,599	28,404
Panel B: Directional Split		
Deviate Under	−0.0374**	−0.0747**
	(0.0175)	(0.0363)
	{0.022}	{0.098}
Deviate Over	−0.0067***	0.0734***
	(0.0020)	(0.0087)
	{0.066}	{0.016}
Test of Symmetry: F-statistic	2.98	15.04
	[0.090]	[0.000]
	{0.081}	{0.001}
Clusters	58	58
Observations	27,599	28,404
Panel C: Continuous Trait		
Never Worked × S_g^c	0.0713**	0.0427
	(0.0302)	(0.0657)
	{0.022}	{0.583}
Clusters	107	107
Observations	40,170	41,288
Never Worked × S_g^d	−0.0033	0.0024
	(0.0142)	(0.0225)
	{0.848}	{0.925}
Clusters	106	106
Observations	40,168	41,286
State Fixed Effects	Yes	Yes
Controls	Yes	Yes

Notes: This table reports estimates of intra-household authority across strategic and operational domains. Column (1) reports the continuous $[0, 1]$ *Decision Participation Index* across five household decisions (marriage of children, property transactions, gifts to kin, education, and social or religious ceremonies). Column (2) reports a binary indicator for routine *Financial Control*. Norm-conforming traits (S_g^c) are plough cultivation, intensive agriculture, stem-family organization, patrilineal descent, endogamy, virilocal residence, and polygyny. Norm-deviating traits (S_g^d) are gender-equal participation in fishing, animal husbandry, agriculture, weaving, and pottery, and bride price. Panels A and B restrict the sample to communities with an unambiguous dominant expectation, defined as ethnolinguistic groups with at least 50% of one trait bundle and less than 50% of the other; GroupType$_g = 1$ denotes conforming-dominant communities. Panel B replaces Never Worked and its interaction with indicators for Deviate Under (never worked in a community where female participation is the dominant expectation) and Deviate Over (worked in a community where non-participation is the dominant expectation), controlling for GroupType$_g$; each coefficient compares women with conforming women in the same type of community. Panel C estimates continuous interaction models on the full sample; each cell is the interaction term from a separate regression. All specifications absorb state fixed effects, and controls follow Table 3 exactly. Standard errors clustered at the ethnolinguistic group level are reported in parentheses; conventional p-values are reported in square brackets. Wild cluster bootstrap p-values (Webb weights, 9,999 replications, clustered by ethnolinguistic group) are reported in braces; for Deviate Under and Deviate Over they equal those for Never Worked and the net effect, since Panel B reparameterizes Panel A. $^*p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

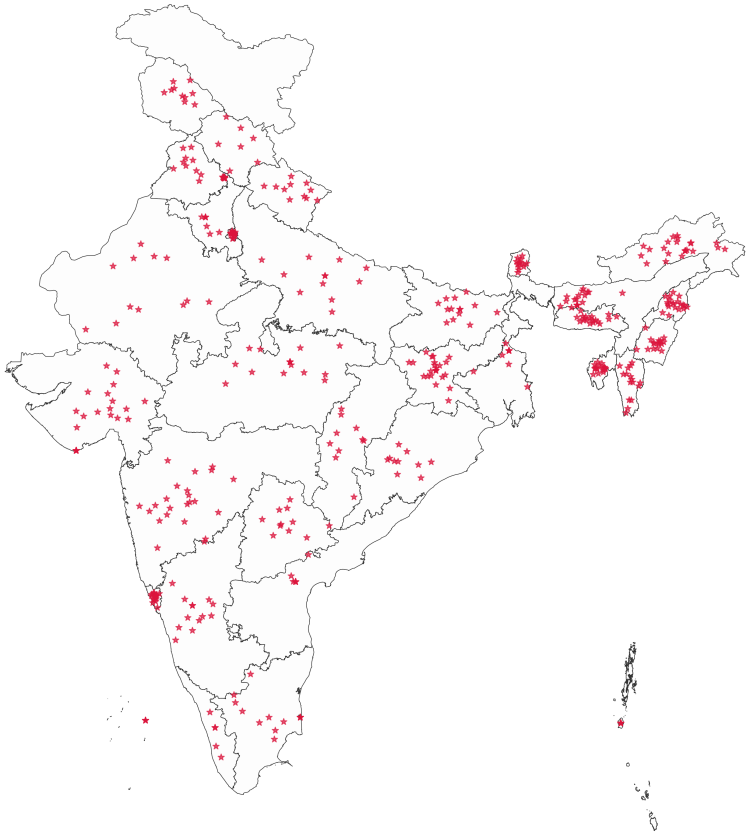


Figure 1: Linguistic Diversity across States in India

Note: The figure maps the distribution of 110 languages across India. Visible stars do not necessarily correspond to the number of distinct languages spoken in a state. In the Andaman and Nicobar Islands, multiple languages appear as a single star due to overlapping geographic coordinates at the degree-level resolution. A random jitter has been applied to the markers to reduce overlap and improve visibility. Refer Table A1 for the exact number of languages in each state.

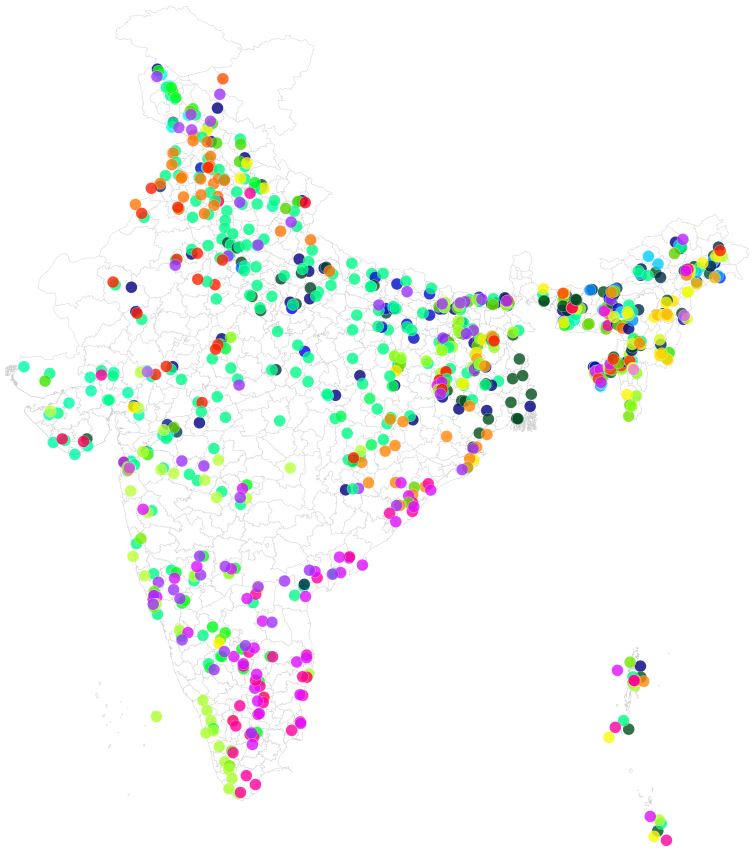


Figure 2: Linguistic Diversity across districts in India

Note: The figure maps the distribution of 110 unique linguistic identities across 294 districts. LASI do not provide survey districts. The current identification is done manually using the community module and tracing the PSU to the respective districts based on Census data. The visible markers do not necessarily correspond to the number of distinct languages spoken in a district. A spatially constrained random jitter has been applied to the markers to reduce point stacking and improve visibility.

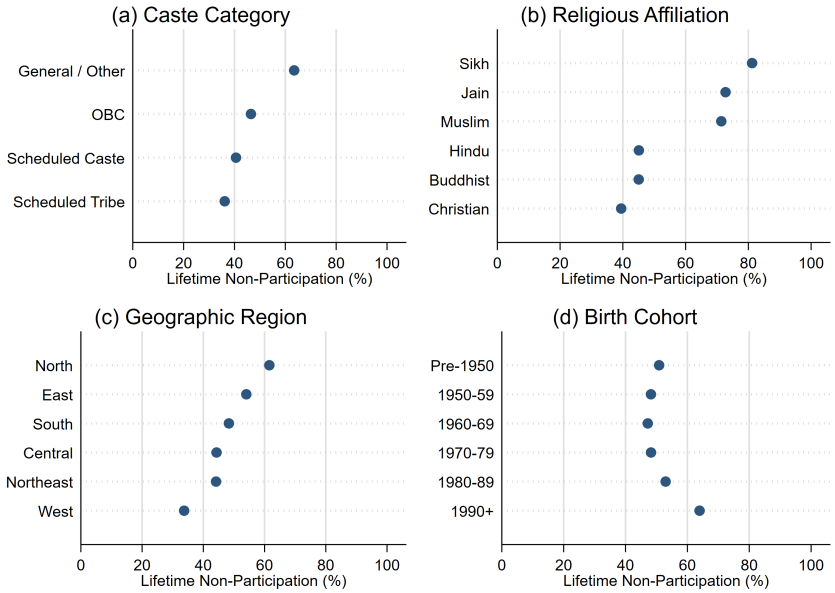


Figure 3: Demographic Distribution and Cohort Profiles of Lifetime Labor Market Non-Participation

Note: This figure displays the percentage of women reporting lifetime labor market non-participation across demographic categories using LASI. Panel (a) plots non-participation by broad caste category; panel (b) by major religious groups; panel (c) across geographic regions; and panel (d) across birth cohorts.

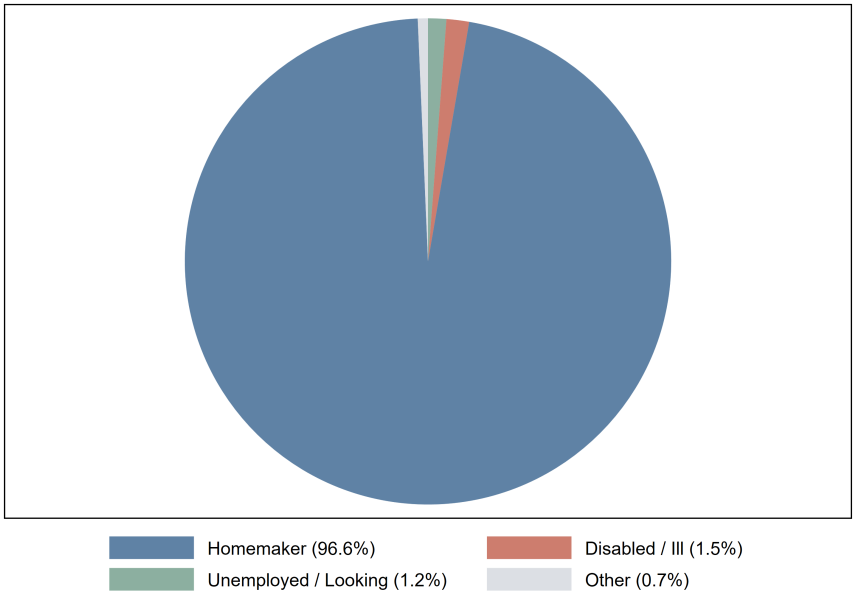


Figure 4: Reported Reason for Lifetime Labor Market Non-Participation

Note: This figure shows the distribution of the primary reason reported by women who never worked.

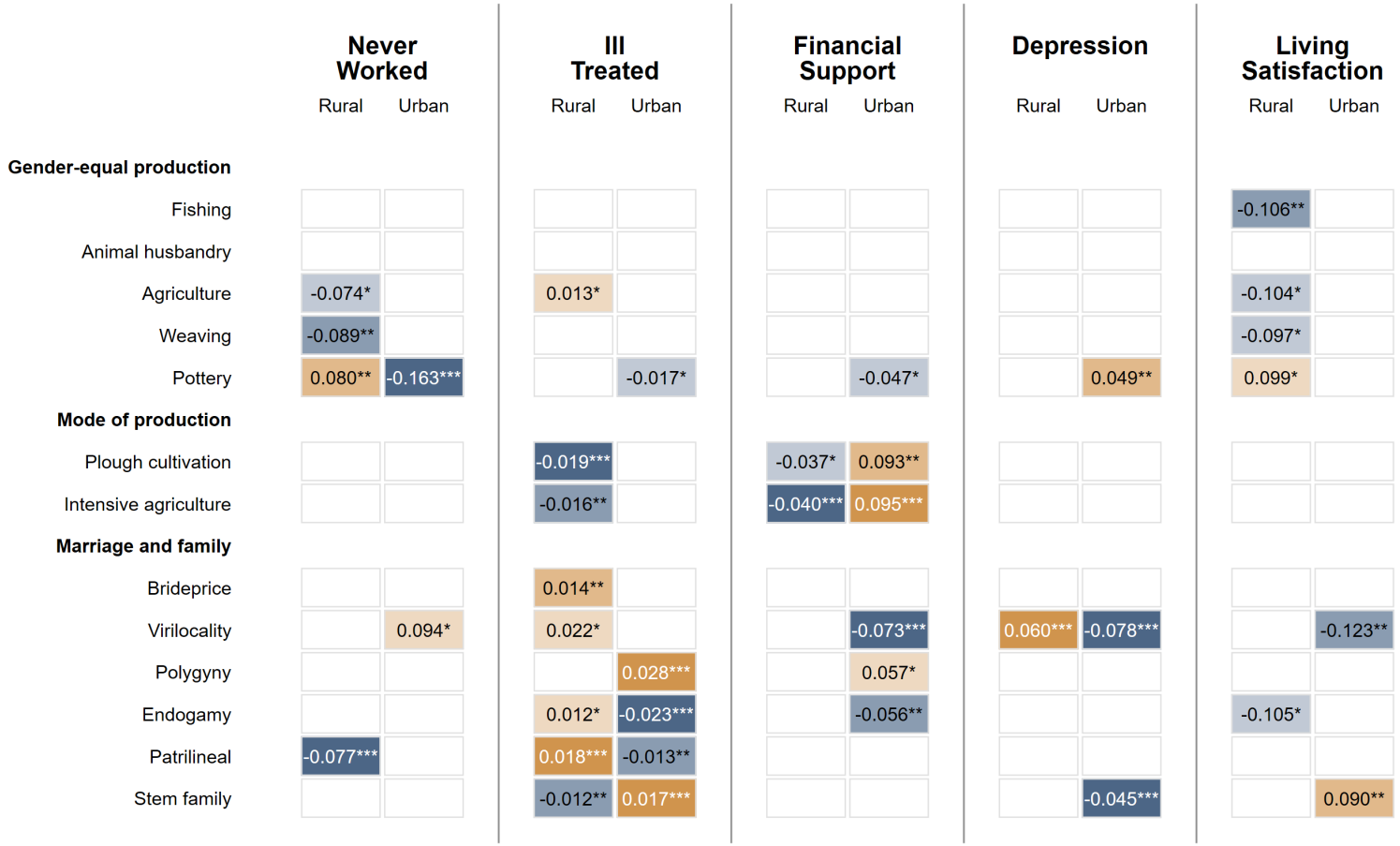


Figure 5: Heterogeneity by Urban Residence

Note: The figure reports coefficient estimates from regressions that interact ancestral traits with an indicator for urban residence and, for later-life outcomes, with lifetime non-participation (Never Worked). For the Never Worked outcome, the "Rural" column reports the coefficient on the ancestral trait, and the "Urban" column reports the interaction between the ancestral trait and the urban indicator. For later-life outcomes, the "Rural" column reports the interaction between the ancestral trait and Never Worked, and the "Urban" column reports the additional effect captured by the triple interaction between the ancestral trait, Never Worked, and the urban indicator; all regressions include the lower-order terms. Orange cells are positive and blue cells negative; darker shading indicates greater statistical significance ($^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$); blank cells are not significant at the 10 per cent level. All regressions include individual controls and state fixed effects, with standard errors clustered at the ethnolinguistic group level; the rural/urban control is replaced by the urban indicator.

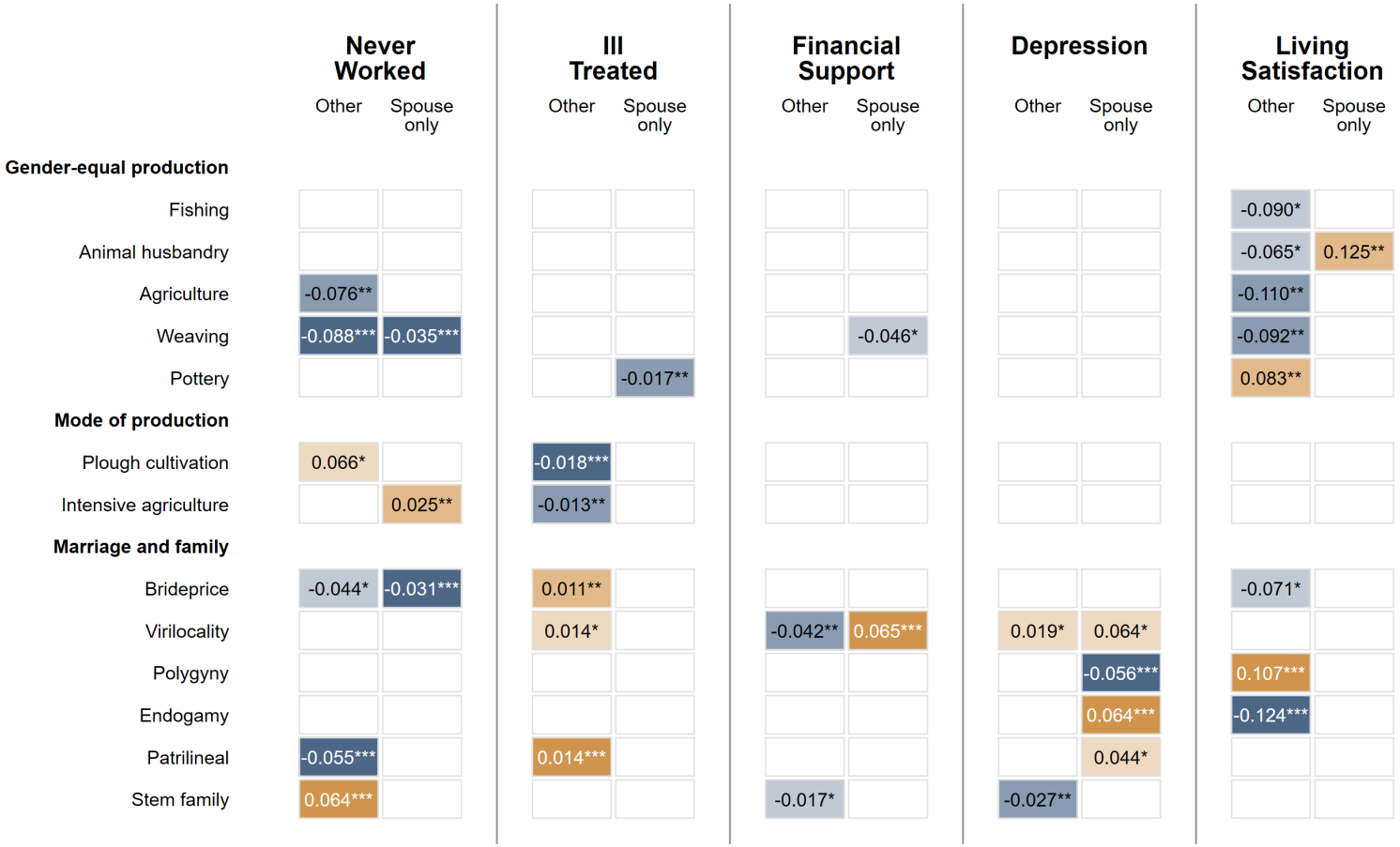


Figure 6: Heterogeneity by Living Arrangement: Living with Spouse Only

Note: The figure reports coefficient estimates from regressions that interact ancestral traits with an indicator for living with one's spouse only and, for later-life outcomes, with lifetime non-participation (Never Worked). For the Never Worked outcome, the "Other" column reports the coefficient on the ancestral trait, and the "Spouse only" column reports the interaction between the ancestral trait and the spouse-only indicator. For later-life outcomes, the "Other" column reports the interaction between the ancestral trait and Never Worked, and the "Spouse only" column reports the additional effect captured by the triple interaction between the ancestral trait, Never Worked, and the spouse-only indicator; all regressions include the lower-order terms. Orange cells are positive and blue cells negative; darker shading indicates greater statistical significance ($^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$); blank cells are not significant at the 10 per cent level. All regressions include individual controls, and state fixed effects, with standard errors clustered at the ethnolinguistic group level.

A1 Appendix: Tables

Table A1: Linguistic Diversity by State and Union Territory

State/UT	Number	State/UT	Number	State/UT	Number
Arunachal Pradesh	26	Manipur	16	Andhra Pradesh	10
Assam	24	Bihar	14	Chhattishgarh	10
Jharkhand	23	Delhi	14	Jammu and Kashmir	10
Maharashtra	23	Sikkim	14	Odisha	10
Daman and Diu*	21	Andaman & Nicobar	13	Punjab	10
Nagaland	20	Karnataka	13	Tamilnadu	9
Meghalaya	19	West Bengal	13	Haryana	7
Tripura	17	Rajasthan	12	Himachal Pradesh	7
Chandigarh	17	Uttar Pradesh	12	Kerala	5
Gujarat	16	Telengana	11	Puducherry	5
Goa	16	Uttarakhand	11	Lakshadweep	3
Madhya Pradesh	16				
Mizoram	16				

Note: The table shows the number of languages spoken in these States and UTs. Note that the number does not necessarily correspond to the total number of distinct languages spoken within a state or UT. *Daman and Diu and Dadra and Nagar Haveli.

Table A2: Assortative Mating in Ancestral Characteristics

Ancestral characteristic	Observed agreement (%)	Expected agreement (%)	Cohen's kappa
Subsistence Dependence: Gathering	99.09	81.65	0.950
Subsistence Dependence: Hunting	98.58	72.13	0.949
Subsistence Dependence: Fishing	97.79	37.60	0.965
Subsistence Dependence: Animal husbandry	98.86	64.91	0.968
Subsistence Dependence: Agriculture	97.32	28.35	0.963
Sex differences: leather working	97.12	38.93	0.953
Sex differences: pottery making	97.16	39.04	0.953
Sex differences: gathering	98.01	63.40	0.946
Sex differences: hunting	97.56	50.08	0.951
Sex differences: fishing	96.71	25.15	0.956
Sex differences: animal husbandry	96.86	30.75	0.955
Sex differences: agriculture	97.42	32.40	0.962
Intensity of agriculture	97.51	46.49	0.954
Animals and plow cultivation	98.79	78.07	0.945
Mode of marriage	97.16	26.78	0.961
Marital residence with kin: after first years	99.09	77.56	0.959
Marital composition: monogamy and polygamy	98.75	77.42	0.945
Community marriage organization	97.32	26.81	0.963
Descent: major type	97.63	41.44	0.960
Domestic organization	96.82	22.82	0.959
Settlement patterns	97.49	35.36	0.961

Notes: The table shows the Cohen's kappa statistics, which measure the agreement between wives' and husbands' ancestral cultural characteristics. Expected agreement denotes the agreement under random matching. Kappa adjusts for agreement expected by chance. Kappa values above 0.80 indicate near-perfect agreement and suggest the prevalence of endogamous marriage. We use the original ethnographic variables in the ethnolinguistic dataset explained in the supplementary material to construct this table.

Table A3: Mechanism Analysis: Classification by Estimated Signs

Explanatory Variable	Decision Participation Index (1)	Financial Control (2)
Panel A: Interaction Model		
Never Worked	−0.0197	−0.0450
	(0.0144)	(0.0303)
Conforming Dominant (GroupType$_g = 1$)	0.0065	−0.0508
	(0.0094)	(0.0309)
Never Worked × Conforming Dominant	0.0219	−0.0309
	(0.0143)	(0.0303)
Net Effect ($\beta_1 + \beta_3$)	0.0022	−0.0759***
	[0.490]	[0.000]
Clusters	70	70
Observations	29,967	30,889
Panel B: Directional Split		
Deviate Under	−0.0197	−0.0450
	(0.0144)	(0.0303)
Deviate Over	−0.0022	0.0759***
	(0.0032)	(0.0087)
Test of Symmetry: F-statistic	1.32	13.72
	[0.255]	[0.000]
Clusters	70	70
Observations	29,967	30,889
Panel C: Continuous Trait		
Never Worked × S_g^c	0.0181*	0.0117
	(0.0103)	(0.0228)
Clusters	101	101
Observations	39,287	40,394
Never Worked × S_g^d	−0.0018	0.0023
	(0.0101)	(0.0182)
Clusters	107	107
Observations	40,170	41,288
State Fixed Effects	Yes	Yes
Controls	Yes	Yes

Notes: This table re-estimates Table 9, classifying ancestral traits by the sign of their statistically significant association with Never Worked in Tables 3-5 rather than by the literature. The classification therefore uses fewer traits and is based on our own estimates. Norm-conforming traits (S_g^c), associated with higher lifetime non-participation, are plough cultivation and stem-family organization. Norm-deviating traits (S_g^d), associated with lower lifetime non-participation, are gender-equal agriculture and weaving, bride price, endogamy, and patrilineal descent. Traits without a significant association in Tables 3-5 are excluded. Samples, controls, and definitions otherwise follow Table 9. Standard errors clustered at the ethnolinguistic group level are reported in parentheses; p-values are reported in square brackets. $^*p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A4: Cultural Correlates of Never Worked: Robustness

Trait	(1) Baseline	(2) Birth District	(3) Caste	(4) Religion×State	(5) Residence×State	(6) Two-way Cluster	(7) Hindu Only	(8) Cohort×State	(9) Probit	(10) Sharpened q
Gender-equal production traits										
Female fishing	-0.002	-0.017	0.030	0.014	-0.000	-0.002	-0.028	0.003	-0.005	-0.002
	(0.033)	(0.023)	(0.035)	(0.028)	(0.029)	(0.033)	(0.032)	(0.032)	(0.109)	[0.566]
Female animal husbandry	-0.016	-0.038	-0.004	-0.010	-0.010	-0.016	-0.045	-0.019	-0.059	-0.016
	(0.036)	(0.027)	(0.036)	(0.030)	(0.026)	(0.036)	(0.038)	(0.035)	(0.108)	[0.491]
Female agriculture	-0.078**	-0.019	-0.059*	-0.060**	-0.064**	-0.078**	-0.058	-0.081**	-0.253***	-0.078**
	(0.031)	(0.023)	(0.031)	(0.029)	(0.025)	(0.031)	(0.039)	(0.032)	(0.093)	[0.041]
Female weaving	-0.091***	-0.043***	-0.070***	-0.068**	-0.067***	-0.091***	-0.092***	-0.093***	-0.282***	-0.091***
	(0.027)	(0.015)	(0.025)	(0.026)	(0.023)	(0.027)	(0.033)	(0.028)	(0.079)	[0.008]
Female pottery	0.003	0.024	0.013	-0.004	-0.037*	0.003	-0.037***	-0.006	0.015	0.003
	(0.029)	(0.022)	(0.030)	(0.016)	(0.021)	(0.028)	(0.013)	(0.029)	(0.087)	[0.566]
Mode of production										
Plough cultivation	0.068*	0.066***	0.047	0.059*	0.064**	0.068*	0.055**	0.068*	0.220*	0.068
	(0.038)	(0.015)	(0.043)	(0.032)	(0.029)	(0.037)	(0.024)	(0.037)	(0.119)	[0.126]
Intensive agriculture	0.045	0.042*	0.027	0.029	0.043	0.045	0.034	0.043	0.143	0.045
	(0.035)	(0.023)	(0.039)	(0.031)	(0.028)	(0.035)	(0.028)	(0.035)	(0.113)	[0.198]
Marriage and family norms										
Brideprice	-0.046*	-0.040**	-0.038	-0.028	-0.030	-0.046*	-0.036	-0.042	-0.128*	-0.046
	(0.025)	(0.020)	(0.025)	(0.024)	(0.021)	(0.025)	(0.027)	(0.026)	(0.074)	[0.126]
Virilocal residence	-0.005	0.037	-0.021	0.010	-0.001	-0.005	0.010	-0.002	-0.016	-0.005
	(0.034)	(0.023)	(0.036)	(0.025)	(0.026)	(0.034)	(0.021)	(0.033)	(0.106)	[0.566]
Polygyny	0.041	-0.038	0.032	0.032	0.029	0.041	-0.011	0.041	0.128	0.041
	(0.050)	(0.034)	(0.051)	(0.049)	(0.046)	(0.050)	(0.019)	(0.046)	(0.159)	[0.385]
Endogamy	-0.073*	0.006	-0.069	-0.061	-0.066	-0.073*	-0.021	-0.073*	-0.223*	-0.073
	(0.042)	(0.030)	(0.044)	(0.043)	(0.040)	(0.042)	(0.026)	(0.040)	(0.135)	[0.129]
Patrilineal descent	-0.057***	-0.035***	-0.051**	-0.031	-0.034**	-0.057***	-0.041*	-0.055**	-0.159***	-0.057**
	(0.020)	(0.011)	(0.019)	(0.021)	(0.017)	(0.020)	(0.023)	(0.021)	(0.061)	[0.025]
Stem family	0.064***	0.025*	0.064***	0.057***	0.051***	0.064***	0.056***	0.060***	0.185***	0.064***
	(0.017)	(0.014)	(0.018)	(0.019)	(0.018)	(0.017)	(0.021)	(0.018)	(0.052)	[0.005]

Notes: Each cell reports the coefficient on the ancestral trait from a separate regression of *Never Worked* on the trait and baseline covariates. The baseline specification controls for age group, marital status, MPCE quintile, religion, education category, sex of household head, residence, and state fixed effects, with standard errors clustered at the ethnolinguistic group level reported in parentheses. Column (2) replaces state fixed effects with birth district fixed effects. Column (3) adds social category (caste) controls (Scheduled Caste, Scheduled Tribe, Other Backward Class, and None of these). Column (4) replaces separate religion and state effects with religion×state fixed effects. Column (5) replaces separate residence and state effects with residence×state fixed effects. Column (6) reports standard errors two-way clustered by ethnolinguistic group and primary sampling unit. Column (7) restricts the sample to Hindu respondents (dropping religion controls). Column (8) replaces age group and state fixed effects with birth-year×state fixed effects. Column (9) reports Probit estimates (latent-index coefficients, not average marginal effects). Column (10) reports Benjamini et al. (2006) two-stage sharpened q-values in brackets, with stars assigned from the q-values: $^{*}q < 0.10$, $^{**}q < 0.05$, $^{***}q < 0.01$. In Columns (1)–(9), stars are based on conventional p-values: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A5: Robustness Checks: Ill-treatment

Trait	(1) Baseline	(2) Birth District	(3) Caste	(4) Religion×State	(5) Residence×State	(6) Two-way Cluster	(7) Hindu Only	(8) Cohort×State	(9) Probit	(10) Sharpened q
Gender-equal production traits										
Female fishing	0.008	0.017**	0.007	0.010	0.009	0.008	0.016*	0.008	0.089	0.008
	(0.008)	(0.008)	(0.008)	(0.008)	(0.007)	(0.008)	(0.009)	(0.007)	(0.114)	[0.266]
Female animal husbandry	0.008	0.012*	0.007	0.010	0.009*	0.008	0.012*	0.009	-0.035	0.008
	(0.006)	(0.007)	(0.005)	(0.006)	(0.005)	(0.006)	(0.007)	(0.005)	(0.130)	[0.167]
Female agriculture	0.011*	0.012*	0.009*	0.011*	0.011**	0.011*	0.011	0.012**	0.058	0.011
	(0.006)	(0.006)	(0.006)	(0.006)	(0.005)	(0.006)	(0.008)	(0.006)	(0.100)	[0.124]
Female weaving	0.007	0.009	0.006	0.009	0.008	0.007	0.010	0.008	-0.028	0.007
	(0.007)	(0.007)	(0.006)	(0.007)	(0.006)	(0.007)	(0.009)	(0.007)	(0.117)	[0.266]
Female pottery	-0.007	-0.019*	-0.006	-0.007	-0.008	-0.007	-0.011	-0.006	-0.121**	-0.007
	(0.009)	(0.010)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.057)	[0.306]
Mode of production										
Plough cultivation	-0.017***	-0.015**	-0.017***	-0.017***	-0.017***	-0.017***	-0.010	-0.017***	-0.060	-0.017**
	(0.005)	(0.007)	(0.005)	(0.005)	(0.005)	(0.005)	(0.009)	(0.006)	(0.106)	[0.015]
Intensive agriculture	-0.013**	-0.009	-0.013**	-0.012**	-0.012**	-0.013**	-0.006	-0.014**	-0.053	-0.013*
	(0.006)	(0.007)	(0.005)	(0.006)	(0.005)	(0.006)	(0.006)	(0.006)	(0.064)	[0.079]
Marriage and family norms										
Brideprice	0.011*	0.011*	0.010*	0.011*	0.010**	0.011*	0.010	0.012**	0.085	0.011
	(0.005)	(0.006)	(0.005)	(0.006)	(0.005)	(0.005)	(0.007)	(0.005)	(0.078)	[0.124]
Virilocal residence	0.017*	0.025	0.020**	0.018**	0.015	0.017*	0.028**	0.018**	0.189***	0.017
	(0.009)	(0.016)	(0.009)	(0.009)	(0.009)	(0.009)	(0.012)	(0.008)	(0.051)	[0.124]
Polygyny	-0.001	0.002	-0.001	-0.000	0.000	-0.001	-0.002	-0.001	0.101	-0.001
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.004)	(0.005)	(0.080)	[0.536]
Endogamy	0.006	-0.000	0.006	0.005	0.004	0.006	0.007	0.007	-0.045	0.006
	(0.006)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)	(0.007)	(0.006)	(0.072)	[0.279]
Patrilineal descent	0.014***	0.016**	0.014***	0.014***	0.014***	0.014***	0.017***	0.015***	0.065	0.014**
	(0.005)	(0.008)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.005)	(0.076)	[0.025]
Stem family	-0.006	-0.002	-0.006	-0.006	-0.006	-0.006	-0.007	-0.007	0.013	-0.006
	(0.005)	(0.007)	(0.005)	(0.005)	(0.005)	(0.005)	(0.006)	(0.005)	(0.053)	[0.232]

Notes: Each cell reports the coefficient on the interaction between *Never Worked* and the corresponding ancestral trait from a separate regression of Ill-treatment on the interaction term, its constituent main effects, and a common set of baseline covariates. The baseline specification controls for age group, marital status, MPCE quintile, religion, education category, sex of household head, residence, and state fixed effects, with standard errors clustered at the ethnolinguistic group level reported in parentheses.

Column (2) replaces state fixed effects with birth district fixed effects. Column (3) adds social category (caste) controls (Scheduled Caste, Scheduled Tribe, Other Backward Class, and None of these) to the baseline. Column (4) replaces separate religion and state effects with religion×state fixed effects. Column (5) replaces separate residence and state effects with residence×state fixed effects. Column (6) reports standard errors two-way clustered by ethnolinguistic group and primary sampling unit. Column (7) restricts the sample to Hindu respondents (dropping religion controls). Column (8) replaces age group and state fixed effects with birth-year×state fixed effects. Column (9) reports Probit estimates (latent-index coefficients, not average marginal effects) instead of linear probability model estimates. Column (10) reports Benjamini et al. (2006) two-stage sharpened q-values in brackets, with stars assigned from the q-values: $^{*}q < 0.10$, $^{**}q < 0.05$, $^{***}q < 0.01$. In Columns (1)–(9), stars are based on conventional p-values: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A6: Robustness Checks: Financial Support Received

Trait	(1) Baseline	(2) Birth District	(3) Caste	(4) Religion×State	(5) Residence×State	(6) Two-way Cluster	(7) Hindu Only	(8) Cohort×State	(9) Probit	(10) Sharpened q
Gender-equal production traits										
Female fishing	-0.006	0.004	-0.004	-0.003	-0.001	-0.006	0.010	-0.009	-0.004	-0.006
	(0.015)	(0.016)	(0.014)	(0.015)	(0.014)	(0.015)	(0.017)	(0.014)	(0.064)	[1.000]
Female animal husbandry	-0.015	-0.006	-0.010	-0.009	-0.007	-0.015	-0.005	-0.014	-0.071	-0.015
	(0.013)	(0.013)	(0.012)	(0.012)	(0.013)	(0.013)	(0.012)	(0.013)	(0.061)	[1.000]
Female agriculture	-0.005	-0.002	-0.001	0.002	0.001	-0.005	0.009	-0.005	-0.009	-0.005
	(0.015)	(0.014)	(0.014)	(0.014)	(0.014)	(0.015)	(0.014)	(0.015)	(0.066)	[1.000]
Female weaving	-0.007	-0.002	-0.005	-0.001	-0.001	-0.007	0.001	-0.005	-0.017	-0.007
	(0.015)	(0.016)	(0.016)	(0.016)	(0.015)	(0.015)	(0.017)	(0.015)	(0.070)	[1.000]
Female pottery	-0.003	-0.008	0.000	-0.005	-0.006	-0.003	-0.004	-0.002	-0.022	-0.003
	(0.014)	(0.012)	(0.016)	(0.014)	(0.015)	(0.014)	(0.012)	(0.015)	(0.074)	[1.000]
Mode of production										
Plough cultivation	-0.009	-0.007	-0.013	-0.004	-0.009	-0.009	-0.039	-0.008	-0.064	-0.009
	(0.019)	(0.018)	(0.020)	(0.020)	(0.019)	(0.020)	(0.026)	(0.019)	(0.088)	[1.000]
Intensive agriculture	-0.014	-0.012	-0.014	-0.011	-0.014	-0.014	-0.031**	-0.012	-0.078	-0.014
	(0.015)	(0.012)	(0.015)	(0.015)	(0.015)	(0.015)	(0.012)	(0.015)	(0.069)	[1.000]
Marriage and family norms										
Brideprice	-0.007	0.004	-0.010	-0.005	-0.002	-0.007	0.003	-0.006	-0.018	-0.007
	(0.013)	(0.012)	(0.013)	(0.013)	(0.013)	(0.013)	(0.014)	(0.012)	(0.058)	[1.000]
Virilocal residence	-0.037*	0.000	-0.036*	-0.027	-0.033	-0.037*	0.003	-0.030	-0.169**	-0.037
	(0.019)	(0.015)	(0.020)	(0.016)	(0.020)	(0.020)	(0.016)	(0.019)	(0.078)	[1.000]
Polygyny	0.002	-0.000	0.006	0.007	0.004	0.002	-0.007	-0.003	0.011	0.002
	(0.019)	(0.013)	(0.019)	(0.021)	(0.021)	(0.019)	(0.014)	(0.018)	(0.094)	[1.000]
Endogamy	0.002	0.003	-0.001	-0.002	0.001	0.002	0.011	0.007	0.009	0.002
	(0.016)	(0.012)	(0.016)	(0.018)	(0.017)	(0.016)	(0.013)	(0.015)	(0.082)	[1.000]
Patrilineal descent	0.008	0.020	0.008	0.009	0.014	0.008	0.014	0.011	0.040	0.008
	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)	(0.014)	(0.012)	(0.064)	[1.000]
Stem family	-0.014	-0.014	-0.015	-0.013	-0.019*	-0.014	-0.010	-0.015	-0.069	-0.014
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)	(0.011)	(0.010)	(0.050)	[1.000]

Notes: Each cell reports the coefficient on the interaction between *Never Worked* and the corresponding ancestral trait from a separate regression of Financial Support Received on the interaction term, its constituent main effects, and a common set of baseline covariates. The baseline specification controls for age group, marital status, MPCE quintile, religion, education category, sex of household head, residence, and state fixed effects, with standard errors clustered at the ethnolinguistic group level reported in parentheses.

Column (2) replaces state fixed effects with birth district fixed effects. Column (3) adds social category (caste) controls (Scheduled Caste, Scheduled Tribe, Other Backward Class, and None of these) to the baseline. Column (4) replaces separate religion and state effects with religion×state fixed effects. Column (5) replaces separate residence and state effects with residence×state fixed effects. Column (6) reports standard errors two-way clustered by ethnolinguistic group and primary sampling unit. Column (7) restricts the sample to Hindu respondents (dropping religion controls). Column (8) replaces age group and state fixed effects with birth-year×state fixed effects. Column (9) reports Probit estimates (latent-index coefficients, not average marginal effects) instead of linear probability model estimates. Column (10) reports Benjamini et al. (2006) two-stage sharpened q-values in brackets, with stars assigned from the q-values: $^{*}q < 0.10$, $^{**}q < 0.05$, $^{***}q < 0.01$. In Columns (1)–(9), stars are based on conventional p-values: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A7: Robustness Checks: Depression

Trait	(1) Baseline	(2) Birth District	(3) Caste	(4) Religion×State	(5) Residence×State	(6) Two-way Cluster	(7) Hindu Only	(8) Cohort×State	(9) Probit	(10) Sharpened q
Gender-equal production traits										
Female fishing	-0.012	0.013	-0.008	-0.012	-0.003	-0.012	-0.013	-0.015	-0.032	-0.012
	(0.017)	(0.015)	(0.017)	(0.016)	(0.017)	(0.017)	(0.016)	(0.017)	(0.075)	[1.000]
Female animal husbandry	0.001	0.018	0.003	-0.004	0.006	0.001	-0.002	0.000	-0.030	0.001
	(0.014)	(0.017)	(0.014)	(0.012)	(0.016)	(0.014)	(0.016)	(0.014)	(0.056)	[1.000]
Female agriculture	0.020	0.036***	0.022	0.014	0.026*	0.020	0.012	0.021	0.043	0.020
	(0.016)	(0.011)	(0.014)	(0.014)	(0.014)	(0.016)	(0.015)	(0.016)	(0.060)	[0.920]
Female weaving	-0.002	0.014	0.000	-0.008	0.002	-0.002	-0.003	-0.004	-0.048	-0.002
	(0.021)	(0.021)	(0.021)	(0.019)	(0.022)	(0.021)	(0.019)	(0.021)	(0.075)	[1.000]
Female pottery	0.028	0.027	0.025	0.032	0.026	0.028	0.058***	0.029	0.083	0.028
	(0.025)	(0.027)	(0.025)	(0.025)	(0.026)	(0.025)	(0.012)	(0.025)	(0.107)	[0.949]
Mode of production										
Plough cultivation	-0.009	-0.031	-0.012	-0.011	-0.005	-0.009	0.004	-0.007	0.089	-0.009
	(0.015)	(0.024)	(0.015)	(0.014)	(0.015)	(0.015)	(0.028)	(0.017)	(0.075)	[1.000]
Intensive agriculture	-0.022	-0.033**	-0.023*	-0.020	-0.019	-0.022	-0.019	-0.023	-0.016	-0.022
	(0.014)	(0.016)	(0.013)	(0.012)	(0.014)	(0.014)	(0.017)	(0.016)	(0.073)	[0.824]
Marriage and family norms										
Brideprice	0.019	0.026**	0.021	0.015	0.022	0.019	0.010	0.020	0.050	0.019
	(0.015)	(0.013)	(0.014)	(0.015)	(0.015)	(0.015)	(0.016)	(0.015)	(0.056)	[0.920]
Virilocal residence	0.024**	0.004	0.025**	0.025**	0.028**	0.024**	0.022	0.025**	0.140**	0.024
	(0.011)	(0.012)	(0.011)	(0.010)	(0.011)	(0.011)	(0.015)	(0.011)	(0.055)	[0.280]
Polygyny	0.008	0.009	0.008	0.010	0.011	0.008	-0.020	0.006	0.078	0.008
	(0.035)	(0.034)	(0.034)	(0.034)	(0.035)	(0.035)	(0.012)	(0.037)	(0.123)	[1.000]
Endogamy	-0.009	-0.015	-0.009	-0.010	-0.012	-0.009	0.016	-0.003	-0.076	-0.009
	(0.033)	(0.033)	(0.032)	(0.031)	(0.032)	(0.033)	(0.017)	(0.035)	(0.117)	[1.000]
Patrilineal descent	0.004	0.013	0.005	0.001	0.005	0.004	0.001	0.003	-0.008	0.004
	(0.015)	(0.015)	(0.014)	(0.015)	(0.016)	(0.015)	(0.017)	(0.015)	(0.053)	[1.000]
Stem family	-0.028***	-0.037***	-0.026***	-0.027**	-0.028***	-0.028***	-0.031***	-0.028***	-0.070	-0.028
	(0.010)	(0.011)	(0.010)	(0.011)	(0.011)	(0.010)	(0.009)	(0.010)	(0.044)	[0.121]

Notes: Each cell reports the coefficient on the interaction between *Never Worked* and the corresponding ancestral trait from a separate regression of Depression on the interaction term, its constituent main effects, and a common set of baseline covariates. The baseline specification controls for age group, marital status, MPCE quintile, religion, education category, sex of household head, residence, and state fixed effects, with standard errors clustered at the ethnolinguistic group level reported in parentheses.

Column (2) replaces state fixed effects with birth district fixed effects. Column (3) adds social category (caste) controls (Scheduled Caste, Scheduled Tribe, Other Backward Class, and None of these) to the baseline. Column (4) replaces separate religion and state effects with religion×state fixed effects. Column (5) replaces separate residence and state effects with residence×state fixed effects. Column (6) reports standard errors two-way clustered by ethnolinguistic group and primary sampling unit. Column (7) restricts the sample to Hindu respondents (dropping religion controls). Column (8) replaces age group and state fixed effects with birth-year×state fixed effects. Column (9) reports Probit estimates (latent-index coefficients, not average marginal effects) instead of linear probability model estimates. Column (10) reports Benjamini et al. (2006) two-stage sharpened q-values in brackets, with stars assigned from the q-values: $^{*}q < 0.10$, $^{**}q < 0.05$, $^{***}q < 0.01$. In Columns (1)–(9), stars are based on conventional p-values: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A8: Robustness Checks: Current Living Satisfaction

Trait	(1) Baseline	(2) Birth District	(3) Caste	(4) Religion×State	(5) Residence×State	(6) Two-way Cluster	(7) Hindu Only	(8) Cohort×State	(9) Sharpened q
Gender-equal production traits									
Female fishing	-0.093**	-0.106**	-0.074	-0.074	-0.112**	-0.093**	-0.110**	-0.110**	-0.093*
	(0.046)	(0.045)	(0.048)	(0.047)	(0.048)	(0.046)	(0.054)	(0.045)	[0.075]
Female animal husbandry	-0.053	-0.087*	-0.041	-0.039	-0.065	-0.053	-0.060	-0.060	-0.053
	(0.039)	(0.051)	(0.038)	(0.039)	(0.043)	(0.039)	(0.041)	(0.039)	[0.154]
Female agriculture	-0.114**	-0.089**	-0.098**	-0.087**	-0.127***	-0.114**	-0.073*	-0.112**	-0.114*
	(0.045)	(0.042)	(0.044)	(0.043)	(0.048)	(0.045)	(0.041)	(0.043)	[0.063]
Female weaving	-0.092**	-0.064*	-0.078*	-0.070	-0.100**	-0.092**	-0.071	-0.093**	-0.092*
	(0.043)	(0.038)	(0.043)	(0.043)	(0.046)	(0.043)	(0.052)	(0.041)	[0.075]
Female pottery	0.088**	0.117***	0.087*	0.096**	0.097**	0.088**	0.137***	0.099***	0.088*
	(0.040)	(0.043)	(0.046)	(0.042)	(0.041)	(0.040)	(0.032)	(0.036)	[0.075]
Mode of production									
Plough cultivation	0.047	-0.032	0.032	0.049	0.047	0.047	0.023	0.025	0.047
	(0.076)	(0.056)	(0.079)	(0.077)	(0.078)	(0.077)	(0.123)	(0.075)	[0.400]
Intensive agriculture	0.053	-0.025	0.043	0.046	0.048	0.053	0.040	0.037	0.053
	(0.054)	(0.036)	(0.056)	(0.055)	(0.055)	(0.054)	(0.051)	(0.052)	[0.245]
Marriage and family norms									
Brideprice	-0.077**	-0.085**	-0.071*	-0.075*	-0.087**	-0.077**	-0.082**	-0.085**	-0.077*
	(0.038)	(0.043)	(0.039)	(0.038)	(0.041)	(0.038)	(0.040)	(0.037)	[0.075]
Virilocal residence	-0.055	-0.117	-0.058	-0.067	-0.073	-0.055	-0.077	-0.073	-0.055
	(0.097)	(0.073)	(0.098)	(0.101)	(0.098)	(0.098)	(0.117)	(0.094)	[0.400]
Polygyny	0.104***	0.028	0.106***	0.087**	0.097**	0.104***	0.071*	0.090**	0.104*
	(0.039)	(0.034)	(0.039)	(0.040)	(0.043)	(0.039)	(0.041)	(0.035)	[0.063]
Endogamy	-0.126***	-0.087	-0.128***	-0.117**	-0.123**	-0.126***	-0.109*	-0.116***	-0.126*
	(0.044)	(0.057)	(0.044)	(0.047)	(0.048)	(0.043)	(0.063)	(0.042)	[0.063]
Patrilineal descent	-0.045	-0.042	-0.036	-0.049	-0.049	-0.045	-0.050	-0.054	-0.045
	(0.037)	(0.043)	(0.038)	(0.038)	(0.041)	(0.037)	(0.041)	(0.037)	[0.180]
Stem family	-0.007	-0.033	-0.011	-0.010	-0.016	-0.007	-0.018	-0.004	-0.007
	(0.033)	(0.030)	(0.034)	(0.032)	(0.035)	(0.033)	(0.030)	(0.034)	[0.465]

Notes: Each cell reports the coefficient on the interaction between *Never Worked* and the corresponding ancestral trait from a separate regression of Current Living Satisfaction on the interaction term, its constituent main effects, and a common set of baseline covariates. The baseline specification controls for age group, marital status, MPCE quintile, religion, education category, sex of household head, residence, and state fixed effects, with standard errors clustered at the ethnolinguistic group level reported in parentheses.

Column (2) replaces state fixed effects with birth district fixed effects. Column (3) adds social category (caste) controls (Scheduled Caste, Scheduled Tribe, Other Backward Class, and None of these) to the baseline. Column (4) replaces separate religion and state effects with religion×state fixed effects. Column (5) replaces separate residence and state effects with residence×state fixed effects. Column (6) reports standard errors two-way clustered by ethnolinguistic group and primary sampling unit. Column (7) restricts the sample to Hindu respondents (dropping religion controls). Column (8) replaces age group and state fixed effects with birth-year×state fixed effects. Column (9) reports Benjamini et al. (2006) two-stage sharpened q-values in brackets, with stars assigned from the q-values: $^{*}q < 0.10$, $^{**}q < 0.05$, $^{***}q < 0.01$. In Columns (1)–(8), stars are based on conventional p-values: $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A9: Predetermined Characteristics of Never-Working Women by Community Type

	Mean, never-working women		Difference within state	Never Worked × Community type
	Participation dominant	Non-participation dominant		
	(1)	(2)	(3)	(4)
Panel A: Predetermined characteristics				
No schooling	0.472	0.531	-0.137***	-0.071
			(0.039)	(0.044)
Scheduled Caste/Tribe	0.824	0.217	-0.328***	-0.117***
			(0.081)	(0.028)
Muslim	0.168	0.178	0.121	0.045**
			(0.076)	(0.021)
Birth year	1961.94	1961.37	0.95	-1.13
			(0.97)	(0.75)
Age at first marriage	19.75	17.67	-0.04	0.35
			(0.26)	(0.25)
Fair/poor childhood health	0.140	0.122	0.009	0.008
			(0.019)	(0.037)
Bedridden ≥1 month in childhood	0.031	0.046	0.003	-0.001
			(0.008)	(0.005)
Missed school due to illness*	0.018	0.034	0.003	0.003
			(0.010)	(0.009)
Poor family in childhood	0.202	0.276	-0.070	-0.034
			(0.045)	(0.034)
Panel B: Reported reason for never working				
Homemaker	0.933	0.970	0.005	
			(0.012)	
Disabled or ill	0.038	0.011	-0.016**	
			(0.007)	
Unemployed/looking for work	0.021	0.011	0.006	
			(0.009)	

Notes: The sample is restricted to communities with an unambiguous dominant expectation, as in Panel A of Table 9. Columns (1) and (2) report raw means for never-working women in participation-dominant ($\text{GroupType}_g = 0$) and non-participation-dominant ($\text{GroupType}_g = 1$) communities. Column (3) reports the coefficient on GroupType_g from a regression of each characteristic on GroupType_g and state fixed effects among never-working women. Column (4) reports the coefficient on Never Worked × GroupType_g from a regression of each characteristic on Never Worked, GroupType_g, their interaction, and state fixed effects, estimated on all women; it tests whether the difference between never-working and working women differs across community types. Panel B is defined only for never-working women. *Asked only of women who attended school. Standard errors clustered at the ethnolinguistic group level in parentheses. $^{*}p < 0.10$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A10: Coefficient Stability Bounds

		$R_{max} = 1.3\tilde{R}^2$		$R_{max} = 2\tilde{R}^2$	
Never Worked ×	$\tilde{\beta}$	δ	$\beta^*(\delta = 1)$	δ	$\beta^*(\delta = 1)$
Panel A: Ill Treated					
Gender-equal agriculture	0.011	—	0.011	—	0.011
Plough cultivation	-0.017	7.1	-0.015	2.2	-0.010
Intensive agriculture	-0.013	3.4	-0.009	1.0	-0.001
Bride price	0.011	25.6	0.010	7.8	0.010
Virilocal residence	0.017	—	0.018	—	0.019
Patrilineal descent	0.014	—	0.018	—	0.028
Panel B: Financial Support Received					
Virilocal residence	-0.037	—	-0.038	—	-0.039
Panel C: Depression					
Virilocal residence	0.024	—	0.030	—	0.044
Stem family	-0.028	149.9	-0.028	45.5	-0.028
Panel D: Current Living Satisfaction					
Gender-equal fishing	-0.093	—	-0.111	—	-0.153
Gender-equal agriculture	-0.114	—	-0.129	—	-0.164
Gender-equal weaving	-0.092	—	-0.105	—	-0.137
Gender-equal pottery	0.088	—	0.113	—	0.175
Bride price	-0.077	—	-0.089	—	-0.117
Polygyny	0.104	—	0.106	—	0.112
Endogamy	-0.126	—	-0.136	—	-0.159
Panel E: Decision Participation Index (Table 9)					
Conforming Dominant (Panel A)	0.044	32.1	0.043	9.9	0.040
S_g^c (Panel C)	0.071	11.4	0.065	3.5	0.051

Notes: The table reports bounds for all interactions between Never Worked and ancestral traits that are statistically significant at the 10 per cent level in Tables 6-8, and for the decision-making interactions in Table 9. The table is based on Oster (2019). $\tilde{\beta}$ is the interaction coefficient from the specification with full controls. δ is the degree of selection on unobservables, relative to selection on observables, required to drive the coefficient to zero; β^* is the bias-adjusted coefficient assuming equal selection ($\delta = 1$). $\tilde{R}^2$ is the R^2 of the controlled regression. The uncontrolled regression includes the interaction, its main effects, and state fixed effects; the controlled regression adds the individual controls (age group, marital status, MPCE quintile, religion, years of schooling, sex of household head, and rural/urban residence). Panel E reports the corresponding bounds for the mechanism analysis, using the sample and classification of Table 9. A dash in the δ column indicates that the coefficient moves away from zero when controls are added, so that no positive degree of proportional selection on unobservables drives it to zero.

Supplementary Material

Construction of Ethnic Traits Variables

This appendix describes the construction of ancestral and ethnographic variables used in the analysis. We follow the variable construction process similar to Alesina et al. (2021).

Gender-Equal Female Labour Force Participation

This set of variables captures societies in which women were historically more actively engaged in production and contributed economic resources to the household. Such societies are characterized by a more gender-equal division of Labour.

Ethnicities are classified into one of the following categories for female participation in each production activity: (i) males only; (ii) males appreciably more; (iii) equal participation; (iv) females appreciably more; and (v) females only. For each production activity (weaving, v45; pottery, v47; fishing, v52; animal husbandry, v53; agriculture, v54), the Ethnographic Atlas classifies the sexual division of labor as males only, males appreciably more, differentiated but equal participation, equal participation, females appreciably more, or females only. We construct an indicator equal to one if participation was equal (including differentiated but equal), if women contributed appreciably more than men, or if women were the sole participants, and zero if the activity was performed only or predominantly by men. Groups for which the activity is absent or unimportant, for which the activity is present but the sexual division of labor is not recorded, or for which data are missing are coded as missing. This accounts for the variation in sample size across activities.

Mode of Agricultural Production

This set of variables captures both the mode and intensity of agricultural production.

Ethnicities are classified into one of three mutually exclusive categories based on the use of the plough (v39): (i) plough absent; (ii) plough present but not aboriginal; and (iii) plough aboriginal and present prior to external contact. Using this classification, we construct a binary indicator equal to one if the society used the plough, regardless of whether it was aboriginal, and zero otherwise.

The intensity of agriculture (v28) is classified in the Ethnographic Atlas into six mutually exclusive categories: (i) complete absence of agriculture; (ii) casual agriculture; (iii) extensive or shifting cultivation; (iv) horticulture; (v) intensive agriculture on permanent fields; and (vi) intensive agriculture largely dependent upon irrigation. After matching, societies fall into four categories: extensive or shifting agriculture, horticulture, intensive agriculture, and intensive irrigated agriculture. We construct an indicator variable equal to one if the society practised intensive agriculture or intensive irrigated agriculture, and zero otherwise.

Marriage Norms and Family Settlement Patterns

We consider several characteristics related to marriage norms, including bride price, post-marital residence patterns, polygyny, and endogamy. Family settlement patterns include whether the ancestors followed patrilineal descent and stem family system.

Bride price (v6) is a binary indicator capturing whether the dominant mode of marriage prior to industrialization involved a transfer of wealth to the bride's family, bride service to the bride's family, or token bride price.

Virilocality is constructed using the variable *v12* from the Ethnographic Atlas, which classifies ethnic groups according to post-marital residence rules. Categories include avunculocal, ambilocal, matrilocal, neolocal, patrilocal, virilocal, and other residence forms. We construct an indicator equal to one for ethnic groups that followed patrilocal or virilocal residence patterns and zero otherwise.

Polygyny is constructed using variable *v9* from the Ethnographic Atlas, which classifies ethnicities according to marital composition. The indicator takes the value of one for societies characterized by occasional or regular polygyny, including sororal and non-sororal forms, and zero otherwise.

Endogamy is constructed using variable *v15* from the Ethnographic Atlas, which identifies six categories of community marriage organization. The variable takes the value of one if the society followed demes without clan segregation, segmented communities without local exogamy, or clan communities, and zero otherwise.

Ethnic groups are classified into four descent types (*v43*): patrilineal, matrilineal, bilateral, and mixed. We construct a binary variable equal to one if the dominant mode of descent is patrilineal and zero otherwise.

Stem family organization is derived from ancestral measures of domestic organization(*v8*). The indicator takes the value of one if the society followed a stem family organization and zero otherwise.