Women's Inheritance Rights and Entrepreneurship Gender Gap

S. Lakshmi Naaraayanan [†]

August 2022

Abstract

This paper studies whether granting equal inheritance rights to women can narrow the gender gap in entrepreneurship. Utilizing a staggered reform that granted women from specific religious groups inheritance rights equal to men, I find that these reforms relax financial constraints and fosters entrepreneurship among women without worsening the quality of new entrants. Post reform, collateral enables financial inclusion and leads to business formation. However, I find that discriminatory social norms work against the inheritance reform with lower female entrepreneurship rates in regions where women face higher discrimination. Despite these opposing norms, the reform increased aggregate entrepreneurial activity without crowding out male business formation. Overall, results suggest that equal inheritance rights for women can narrow the gender gap in entrepreneurship, even in the presence of discriminatory social norms.

JEL classification: D14, J23, L26, M13

Keywords: Female Entrepreneurship, Financial Inclusion, Gender Gap, Economic Growth

[†]Assistant Professor, London Business School. Email: lnaaraayanan@london.edu. For helpful comments and suggestions, I thank Utpal Bhattacharya, Lauren Cohen, Shawn Cole, Ralph De Haas, Harrison Hong, Sabrina Howell, Narayana Kocherlakota, William Kerr, Josh Lerner, Abhiroop Mukherjee, Narayan Naik, Ramana Nanda, Kasper Nielsen, Paige Ouimet, Elias Papaioannou, Daniel Paravisini, Sarada, Vikrant Vig, Chris Woodruff, Daniel Wolfenzon, Toni Whited, Constantine Yannelis, and seminar participants at Arizona State University (W.P Carey), Boston College (Caroll), Copenhagen Business School, European Bank for Reconstruction and Development (EBRD), Harvard Business School, INSEAD, London Business School, Notre Dame (Mendoza), University of Michigan (Ross), University of Rochester (Simon), University of Texas Dallas (Naveen Jindal), and conference participants at the 2022 Barcelona Summer Forum, 2020 EFA meetings, 2019 WFA meetings, the 2019 SFS Cavalcade North America meetings, 2019 FIRS Conference, USC Marshall Ph.D. Conference, 19^{th} REER Conference, 2019 NFA meetings, 2019 CICF (Guangzhou), 2019 Greater Bay Area Summer Finance Conference. I thank Andrew Foster and the National Council for Applied Economic Research (NCAER) for sharing data. All errors are my own.

1 Introduction

Despite gender gaps narrowing in recent decades across many domains, they are still significant in many contexts (Goldin, 2014; Fletcher, Pande, and Moore, 2017). Much of the reduction in gender gaps, especially in labor force participation, can be attributed to changing social norms about gender roles and concomitant legislation aimed at gender equality (Jayachandran, 2021b). Yet, we know relatively little about whether and to what extent legislation interacts with gender-biased social norms in reducing gender gaps.

This study investigates whether legislation aimed at gender equality reduces gender gaps in the presence of discriminatory social norms. Specifically, I focus on the effect of such legislation on narrowing the gender gap in entrepreneurship. Entrepreneurship is a relevant setting as it has long been a hallmark of economic growth through its key role in driving innovation and job creation. Moreover, there is a pervasive gender gap in entrepreneurship across countries, which is starker in developing countries characterized by discriminatory social norms biased against women (World Bank, 2012). Reducing this gap can positively impact economic growth, highlighting the importance of understanding the frictions that impede business formation among women (Hsieh, Hurst, Jones, and Klenow, 2019; Galor and Zeira, 1993; Chiplunkar and Goldberg, 2021). In doing so, the paper adds to the nascent and burgeoning literature on the role of cultural norms in the effectiveness of policies in developing economies (Acemoglu and Robinson, 2021; Bau, 2021; Lowes, Nunn, Robinson, and Weigel, 2017).

In many developing countries, women lack assets due to unequal inheritance rights, limiting women's ability to put up collateral (Klapper and Parker, 2010; World Bank, 2019). To address this gender inequity in asset ownership, over the past few decades, more than twenty countries have resorted to legal reforms to end such discrimination by granting women equal inheritance rights (see Figure 1). Standard economic theory predicts that entrepreneurship should respond to easing constraints through such reforms (Holtz-Eakin, Joulfaian, and Rosen, 1994a; Kerr and Nanda, 2011). However, this link may be severed or weaken in the presence of discriminatory social norms, such as limiting women's ability to interact with men (Field, Jayachandran, and Pande, 2010; Jayachandran, 2021b; Bursztyn, González, and Yanagizawa-Drott, 2020). In this setting, the large social costs of starting a business might outweigh the potential gains, making such

inheritance reforms ineffective. Such a tradeoff makes this paper's key question – whether legal reforms granting women equal inheritance rights are sufficient in catalyzing entrepreneurship, even in the presence of discriminatory social norms – an empirical issue worth examining.

I utilize a legal reform in India that granted women from specific religious groups equal inheritance rights and find that the improved access to finance narrows the gender gap in entrepreneurship. The reform significantly increased firm creation by women, especially in regions experiencing larger inheritances, without worsening the quality of new entrants. Post reform, women gain access to collateral, enabling financial inclusion and leading to business formation. Moreover, I find that discriminatory social norms work against the inheritance reform with lower female entrepreneurship rates in regions where women face higher discrimination. Despite these opposing norms, the reform increased aggregate entrepreneurial activity without crowding out male business formation. Overall, this study underscores the importance of access to finance in narrowing the gender gap in entrepreneurship.

This study focuses on staggered changes in inheritance rights for women. Five states implemented the reform between the late 1970s and the early 1990s, followed by the remaining 24 states in 2005 under a federal amendment to the law. A key feature of the reform is that it affected only women from specific religious groups as most personal laws in India, including inheritance laws, vary by religion. Specifically, women from the Hindu, Sikh, Buddhist, and Jain religious communities (hereafter, treated communities) were granted equal inheritance rights, while women from other religious groups, i.e., Muslims, Christians, Jews, and others (hereafter, non-treated communities) were unaffected.

Consistent with Deininger, Goyal, and Nagarajan (2013), I find that the reform was effective. Comparing the inheritances among siblings in households with parental death around the reform, I show that the reform had the intended effect of increasing inheritance among women.[1] While other factors might correlate with the timing of the state-specific reform, the identifying assumption is that the timing of parental death relative to the timing of the reform at the state-level is exogenous.

[1]Mainly, the reform led to an increase in inheritance, in the form of land. In many developing countries, farmland is among the most critical assets to the rural poor, and it is more often inherited than bought. For example, figures from the World Bank Living Standards Measurement Surveys suggest 65% of landholding households inherit agricultural land in Peru, 70% in Nigeria, 85% in India and 86% in Nepal.

Comparing siblings from treated religious communities, I find that the reform increased the probability of inheriting land among women by 12% and the size of the inherited land by 26%. The average value of land inherited is economically significant, as it is almost twice as large as the average annual household income. Several additional tests show no change in inheritance patterns among siblings from the non-treated religious communities and among women in non-reforming states, thus ruling out unobserved factors driving the increase in inheritance.

In my main tests, I examine whether the reform led to business formation among women. I use novel census microdata on small and medium-sized enterprises that contain detailed information on the timing of business formation, and on the gender, and religion of the entrepreneur.

Comparing woman entrepreneurs from treated religious communities to everyone else (i.e., male entrepreneurs from treated religious communities and entrepreneurs from the non-treated religious communities) within the same state and year, I find that the number of new women enterprises increased by 16%. This increase is equivalent to a 5% reduction in the gender gap among entrepreneurs. These comparisons within state-year effectively control for unobserved time-varying factors that affect the decision to become an entrepreneur.

The empirical specification rules out concerns about location and industry-specific effects that may differentially affect business formation. First, state-industry fixed effects control for unobserved time-invariant determinants of state-industry performance (e.g., natural endowments, location, etc.). Second, industry-year fixed effects control for time-varying industry shocks (e.g., technological innovation). Lastly, state-year fixed effects control for trends in the local economic conditions and general policies that affect business formation. Further analysis finds that the increase in female entrepreneurial activity is robust to the inclusion of state-industry-year fixed effects.

The setting further allows me to rule out concerns about unobserved omitted variables differentially affecting entrepreneurs from different religious groups. Specifically, I exploit variation in inheritance rights across gender and religion and make comparisons (i) across males and females within treated religious communities and (ii) across treated and non-treated women. Across these comparisons, I continue to find an increase in business formation among women from treated religious communities, thus ruling out concerns about overall trends, gender-specific trends, and religion-specific trends in entrepreneurship as alternative explanations.

I argue that the increase in female entrepreneurial activity is most consistent with the reform relaxing financial constraints for women. To show this, I present two pieces of evidence. First, after the reform, industries with higher financing needs exhibited a more significant increase in business formation by women relative to men. Second, regions with more developed financial institutions experienced a more substantial increase in female entrepreneurial activity than other areas. To identify regions with improved access to financial institutions, I use the policy-driven nature of a bank branching program that led to a plausibly exogenous variation in bank entry into different regions (Burgess and Pande, 2005). Moreover, I present evidence of a larger treatment effect in districts where women from treated religious communities inherit more land identified using the inheritance dataset. This result is the most direct evidence consistent with larger inheritances associated with greater increases in female business formation rates around the inheritance reform.

In further tests, I consider and rule out several alternative mechanisms, including increased human capital investment, increased intrahousehold bargaining, and changes in risk-taking. Note that my results on the increase in female entrepreneurship around the inheritance reform are also inconsistent with both the unitary and the benchmark version of a collective household model, both of which would predict that the woman receiving inheritance would decrease her labor supply (Heath and Tan, 2019; Field, Pande, Rigol, Schaner, and Troyer Moore, 2021; De Mel, McKenzie, and Woodruff, 2009). Overall, my results are most consistent with women's financial inclusion driving the observed increase in entrepreneurship.

Next, I examine any potential interaction effects between discriminatory social norms and financial constraints. In particular, regions where women face low discrimination, experienced a significant increase in female business formation, an effect not driven by rural areas. While, on average, the reform relaxes financial constraints for the marginal women entrepreneur, these findings suggest that discriminatory social norms work against the beneficial effects of the reform in some cases. These results are significant as more than thirty countries, with varying degrees of discriminatory social norms, still do not have equal inheritance rights for women. My results suggest that in environments with strong discriminatory norms, a reform aimed at gender equality might reduce aggregate entrepreneurial activity and potentially affect economic growth.

Given the importance of evaluating the aggregate effect of the reform in light of the above results, I next proceed to examine the effect of inheritance reform on overall entrepreneurial activity. Note that while the identification strategy can disentangle macroeconomic confounds from the reform's effect, the data do not allow for welfare analysis. First, the inability to observe counterfactual males from the treated religious communities, some of whom are potentially crowded out because of the reallocation of land from males to females, makes welfare analysis challenging. Second, in some cases, the reform has the effect of redistributing assets among heirs with an ambiguous effect on aggregate entrepreneurial activity. Lastly, prior work studying the same reform shows that it increases female foeticide and domestic violence, making it challenging to derive welfare implications on the overall effects of inheritance laws in India (Bhalotra, Brulé, and Roy, 2020; Anderson and Genicot, 2015). Despite these challenges, I present suggestive evidence that the reform positively impacted aggregate entrepreneurial activity.

First, I estimate the quality of the marginal woman entrepreneur under the assumption that differences in quality will show up as differences in firm outcomes relative to male entrepreneurs, as measured by performance. If the reform relaxes financial constraints for aspiring women entrepreneurs, we expect these post-reform businesses to be of higher quality. Alternatively, the reform could draw in women with lower ability, in which case the post-reform businesses are likely to be of lower quality. Comparing measures of quality, closure rates and performance, I find that new female businesses after the reform are of higher quality, relative to new male businesses, based on observable characteristics and after controlling for macroeconomic confounds.

Second, I evaluate the effect of the reform on aggregate entrepreneurial activity. On the one hand, the resulting loss of collateral for some male entrepreneurs might negate the increase in female entrepreneurship, leading to a decline in overall entrepreneurial activity. On the other hand, as male entrepreneurs from treated religious communities might have access to other financing sources, the aggregate entrepreneurial activity might increase, driven by the increase in female entrepreneurship. The results comparing overall business formation across the treated and non-treated religious communities suggest that the reform increased aggregate entrepreneurial activity. Further, I rule out concerns that changes in business formation rates among male entrepreneurs, some of whom now have lower capital than women to start businesses, drive these effects. I also rule out concerns regarding spillover effects on non-treated

religious communities that might instead drive aggregate entrepreneurship. Overall, my findings suggest that in the context of entrepreneurship, the inheritance reform did have an overall positive effect.

Lastly, I consider several alternative interpretations of my baseline results. First, one interpretation of the baseline results is that women are merely listed as owners, while males in households operate firms. To mitigate such a concern, I examine and find that the baseline increase is larger in female-dominated industries relative to male-dominated industries, and further, these new female enterprises employ more women and fewer men. Second, I rule out the possibility that the relative increase in female entrepreneurship in female-dominated industries could instead be driven by changes in demand for products in these industries. Lastly, I show that the baseline increase documented in the sample of registered businesses is also present in the sample of unregistered businesses in the informal sector, thus ruling out concern that the baseline results capture an increase in registration but not the creation of new businesses.

This paper contributes to a nascent and burgeoning literature on the role of norms for moderating the effects of different policies in developing economies (Ashraf, Bau, Nunn, and Voena, 2020; Bau, 2021; Ebenstein, 2014; La Ferrara and Milazzo, 2017; Schoellman and Tertilt, 2006; Tertilt, 2006; Lowes, Nunn, Robinson, and Weigel, 2017; Bursztyn, González, and Yanagizawa-Drott, 2020) as well as a growing literature that examines the effects of gender-related cultural traditions (Fernandez, 2007; Tabellini, 2008; Alesina, Giuliano, and Nunn, 2013; Alesina and Giuliano, 2014; Jayachandran and Pande, 2017; Gneezy, Leonard, and List, 2009; Harari, 2019).

Second, this paper contributes to the extant literature that analyzes the impact of wealth on becoming an entrepreneur. It highlights the role of financial inclusion in explaining the gender gap in entrepreneurship, especially in the presence of discriminatory social norms. Prior literature on financial constraints and entrepreneurship emphasizes wealth and credit in firm creation in developed countries. For example, Evans and Leighton (1990); Holtz-Eakin, Joulfaian, and Rosen (1994b) document a robust positive correlation between wealth and the likelihood to start a business. Schmalz, Sraer, and Thesmar (2017); Adelino, Schoar, and Severino (2015) document a collateral channel in stimulating entrepreneurship. Complementary to these works, my findings show that, even in the presence of discriminatory social norms, financial inclusion through equal inheritance rights reduces the gender gap in entrepreneurship.

Third, this paper provides novel evidence that inheritance reforms alter occupational choices among women and increase female entrepreneurship without affecting male entrepreneurship, the quality of new entrants, and led to an increase in aggregate entrepreneurial activity in the economy, thereby adding to the literature that examines the effect of inheritance laws across different countries. These results are different from prior work, which has exclusively focused on the effect of inheritance reforms for women, finding that it is associated with an increase in education for second-generation women (Deininger, Goyal, and Nagarajan, 2013; Harari, 2019; Roy, 2015), increased autonomy, and labor supply (Heath and Tan, 2019), and greater bargaining power (Roy, 2008; Anderson and Genicot, 2015).

Lastly, this study contributes to the literature on the determinants of female entrepreneurship by highlighting that initial asset inequality through unequal inheritance rights fosters the gender gap in entrepreneurship in emerging markets. Several papers have documented differences in propensity among men and women to pursue an entrepreneurial activity (Fischer, Reuber, and Dyke, 1993; Ayres and Siegelman, 1995; Ardagna and Lusardi, 2008; Gompers and Wang, 2017). Prior work has focused on spatial determinants, industry structure, and the role of political reservations (Ghani, Kerr, and O'connell, 2013; Ghani, Kerr, and O'Connell, 2014b; Ghani, Kerr, and O'connell, 2014a). Another strand of literature in advanced economies documents several factors that explain the gender gap in entrepreneurship, including career risk (Gottlieb, Townsend, and Xu, 2021; Zandberg, 2021; Core, 2020), financial innovation (Hazan, Weiss, and Zoabi, 2019), marital property laws (Koudijs, Salisbury, and Sran, 2021; Koudijs and Salisbury, 2020), opportunity costs (Luo, 2017), and networking frictions (Howell and Nanda, 2019).

From a policymaker's perspective, my findings underscore that policies aimed at gender equality likely narrow the gender gaps. Importantly, they show that an equal distribution of wealth can lead to a more innovative industrial transition from an agrarian to an industrial economy and, in the long run, more entrepreneurship. This finding is important as recent evidence from the United States suggests that misallocation of talent in the labor market is a significant hindrance to growth. Further, implementing policies and programs that allow women to participate fully and equally in the labor market can potentially work around restrictive norms and may be one way to help female entrepreneurship and employment, in the long run.

2 Institutional setting and data

2.1 Inheritance laws in India

After independence, the formulated constitution of India allowed personal laws, including inheritance laws, to vary by religion. The Hindu Succession Act of 1956 (HSA 1956), governs the present-day inheritance rights of four religious communities: Hindus, Buddhists, Jains, and Sikhs. The act was a first attempt at establishing a woman's right to inherit property and codify a law of succession that gave equal rights of inheritance to sons and daughters. The act, however, lost by a majority vote in parliament.[2]

Five states amended the act to secure equal inheritance rights for sons and daughters belonging to the treated communities. These states include Kerala in 1976; Andhra Pradesh in 1986; Tamil Nadu in 1989; and Maharashtra and Karnataka in 1994. In the remaining 24 states, men retained the right by birth to joint property until 2005. In 2005, an amendment to the Hindu Succession Act, 1956, was enacted as a law. Under the amendment called the Hindu Succession (Amendment) Act of 2005, all daughters hold the right by birth to joint property. In my empirical approach, I exploit the cross-state variation in the timing of the amendments, which affected the four treated communities but not other religious communities.

Additionally, Appendix Table IA1 shows that observable differences in state-level macroeconomic characteristics do not explain the timing of reform, consistent with Anderson and Genicot (2015), who argues that no systematic reason exists for the specific years in which these different states enacted their changes before 2005. Further, an examination of decisions in court cases reveal that the judicial system in India upholds the letter and spirit of the regulation.

2.2 Data sources

I use two datasets, (i) a representative survey data on households with information on inheritances, and (ii) the universe of small and medium-sized enterprises with information on the timing of the startup including the gender and religion of the entrepreneur.

[2] Appendix A.1 discusses in detail the evolution of female property rights in India.

2.2.1 Inheritance dataset

I use the 1999 wave of the Rural Economic and Demographic Survey (REDS), a nationally representative survey of rural households in 17 major states of India spread across 100 districts.[3] The REDS panel was collected in multiple waves between 1971 and 2006 and has been used previously to study agricultural productivity in India (Foster and Rosenzweig, 1995, 1996).[4] The survey contains detailed retrospective information on inherited landholdings, parents' landholdings, and individual characteristics of all household members, including all siblings of the household head and married daughters. Unfortunately while rich on several dimensions, the data does not contain detailed information on occupational choices, including entrepreneurship.

Panel A of Appendix Table IA2 presents descriptive statistics on the household members (siblings) split by gender and whether the household head died before or after the state-specific inheritance reform. The univariate comparisons reveal a significant increase, after the passage of inheritance reform, in the fraction of women receiving an inheritance, the share of inheritance received by women, and the amount of inheritance received in the form of land by women. In terms of individual characteristics, both men and women are highly likely to be married and come from households where the heads die at a similar age. On average, women come from larger families having more sisters and are less likely than men to be firstborn, consistent with prior work on son preference (Bhalotra, Brulé, and Roy, 2020; Jayachandran and Pande, 2017)

Overall, the REDS dataset is well suited to analyze changes in inheritance patterns around the passage of the inheritance reform. However, the dataset lacks identifiers making it impossible to link it to the entrepreneurship dataset at the household or business level which I discuss below.

2.2.2 Entrepreneurship dataset

To investigate the impact of inheritance reform on women's entrepreneurship, I use the All India Census of Micro, Small, and Medium Enterprises (hereafter Census). The Census covers the

[3]Because HSA 1956 did not apply to Jammu and Kashmir (Agarwal, 1994), I drop the state from my analysis, thus leaving me with 16 major states. Also, inheritance related questions were not part of the survey until the 1999 wave of the survey.

[4]As the latest REDS was conducted in 2006, the time between the amendment to the inheritance reform in 2005 and the survey is short and renders the last wave unsuitable for analyzing the response to the amendment. Hence, throughout the paper, I present results for all states and early reforming states.

universe of existing businesses formally registered with the respective state governments.[5] Additionally, it provides a sample of unregistered businesses with multiplier weights, which I use in additional analyses to rule out concerns about formalization in rural areas.

Panel B of Appendix Table IA2 presents descriptive statistics on the businesses in the entrepreneurship dataset split by gender around the reform. The univariate comparisons reveal that new female businesses are significantly smaller and less likely to be in manufacturing than new male businesses, consistent with prior work using the ASI/NSS data (Ghani, Kerr, and O'Connell, 2014b). At the same time, the average male and female businesses in the sample are multiproduct firms. In terms of performance, new female businesses are less likely to close for operational reasons and suffer a decline in net worth than new male businesses. Note that while these differences are statistically significant, most of them are economically small.

Importantly, the Census, in its data collection process, does not stratify by gender or religion, and there are no systematic time trends in the coverage of businesses across religion or gender. Consistently, in Appendix Figure IA 2, I plot the distribution of start-up years and find no differential time trends in business formation either across gender or religion. Appendix A.2 provides more details on the data, including the coverage and the collection process adopted by the Census.

Two main advantages make this dataset particularly well suited to examine the impact of the inheritance reform on the gender gap in entrepreneurship. First, it is the only dataset containing detailed information on gender, the geography of operations, and the religion of the owner of the enterprise.[6] Second, the data contains current and historical information on the enterprise itself, such as the start date, initial investment in real assets, etc., which is particularly suited to study mechanisms driving owners' entry decisions. However, the main drawback of the MSME Census is that it does not collect information on inheritances or the family structure of the entrepreneur. Moreover, the data lack identifiers which prevent me from combining the inheritance dataset

[5]The Micro, Small, and Medium Enterprises (MSME) sector is a significant contributor to the Indian economy. Official figures from the Ministry of MSME state that this sector contributes 8% of the GDP and comprises 50% of India's total manufactured exports, 45% of India's total industrial employment, and 95% of all industrial units. Please see Appendix A.2 for further details.

[6]The datasets used in prior research, such as the Annual Survey of Industries (ASI), the Economic Census (EC), the National Sample Survey (NSS), and the Socio-Economic Caste Census (SECC), do not contain information on the entrepreneur, the business and, importantly, the start date and the religion of the entrepreneur, thus making them unsuitable for understanding the effect of the inheritance reform.

to the entrepreneurship dataset. In Appendix Table IA4, I am able to merge the inheritance information from the REDS at an aggregate regional level and present additional evidence on the mechanisms.

3 Effect of the reform on inheritance of land

In this section, I verify that the reform led to a significant increase in females' likelihood to inherit land. I briefly overview the empirical strategy, the main estimating equations followed by the results.

3.1 Empirical strategy

The starting point of the analysis is to examine changes in inheritance patterns among siblings around the inheritance reform. To do so, I estimate the model specified in Equation 1, following Deininger, Goyal, and Nagarajan (2013).[7] The unit of observation is an individual, and the sample includes 5,252 siblings in the early reform states with a positive value of family landholdings and experiencing parental death.

In a multivariate regression framework, I focus on the subsample of siblings from treated communities to assuage concerns regarding religion-specific differences in inheritance patterns. In particular, the specification tests whether the legal change affected inheritance received by females relative to male siblings depending on whether the household head died before or after the state-specific reform year.[8] I study both the extensive and intensive margins by estimating the following specification:

[7] They use the 2006 wave of the REDS data which is a panel of households in the 1999 dataset and 8 new households surveyed between 2005 and 2006.

[8] Note that this empirical strategy differs from Roy (2015) on three fronts. First, I focus on the effect of the inheritance reform on siblings who are directly affected instead of second-generation women, for whom the link is more tenuous, which is the focus of their study. Second, by focusing on the second generation, their study uses the grandfather's death relative to the state-specific reform year in a triple differences framework with age as the treatment intensity. Further, ad-hoc sample restrictions based on age and marital status skew the sample towards certain types of individuals. Lastly, sibling sex composition plays a crucial role in resource allocation among children within households. My empirical strategy holds constant these factors by including relevant fixed effects, thus alleviating concerns regarding selection effects. In summary, the sample selection criteria and empirical choices made in their study potentially reflect differences in the conclusions.

$$\begin{aligned} y_{itsh} = \alpha_1 + \beta_1 \text{Female}_i + \beta_2 \text{Death post reform}_h + \beta_3 \text{Death post reform}_h \times \text{Female}_i + \\ \beta_4 X_h \times \text{Death post reform}_h \times \text{Female}_i + \omega_s + \theta_t + \epsilon_{itsh} \end{aligned} \tag{1}$$

where y_{itsh} is an indicator variable (or natural logarithm of one plus land inherited in acres) for whether individual i, born in year t, in household h inherited any land. $Female_i$ and $Death\ post\ reform_h$ are indicator variables for whether an individual is a female and for whether the household head died after the state-specific date of the reform, respectively. X_h is a set of individual and parental characteristics that include marital status at the time of the reform, caste, parental landholdings, and parental education. ω_s are sibling-composition fixed effects to control for the effect of family structure and θ_t are the year of birth fixed effects to control for cohort effects that may affect inheritance patterns independently from the reform.[9]

The coefficient of interest (β_3) identifies the effect of the law change on the propensity (and magnitude) of females to inherit the land conditional on covariates. The estimations compare inheritances among siblings in households where the head's death occurred before the reform to households where the head's death occurred after the reform. While other factors might correlate with the timing of the state-specific reform, the identifying assumption is that the timing of death relative to the timing of the reform at the state level is exogenous.[10] Further, in some specifications, I also vary the covariates to allow for the impact of the reform to be time-varying by interacting $Death\ post\ reform_h \times Female_i$ with indicator variables for the year of death of household head.

Additionally, I use siblings from non-treated communities in reforming states as a placebo to rule out time-varying unobserved factors that might explain the inheritance patterns. Further, I perform a bevy of tests in Section 8 to mitigate concerns about time-varying unobserved confounds, including comparisons between treated women and non-treated women within reforming states, comparisons between women from non-treated communities across reforming

[9] India exhibits a general preference toward sons, and this tendency is shown to have a significant impact on resource allocation across children (Jayachandran and Pande, 2017). Hence, a household with male-skewed child composition might allocate resources and transfer assets differently and comparisons that do not hold sibling sex composition fixed might pick-up selection effects rather than reflecting the impact of the reform.

[10] In the REDS dataset, 60% of respondents, became the head of their household after their father died. While the survey does not give the exact time at which they inherited the land, children typically inherit the land upon a father's death. Also, note that household headship does not necessitate the inheritance of land or a father's death.

and non-reforming states, changes in inheritance patterns among treated women in non-reform states around the state-specific reform years, among others.

3.2 Results

Table 1 reports regression results examining changes in inheritance among women around the reform using the multivariate regression framework laid out in Equation 1. Columns 1 to 4 model the likelihood of inheriting land among siblings, using a linear probability model, while columns 5 to 8 model the size of the inherited land (measured in acres). The estimates from column 1 suggest that the proportion of males in reforming states that inherit land compared to females increases by around 66%, if the death occured before the reform. This lower proportion among women contrasts with the significantly higher proportion (by 12%) in households where the head died after the reform.

Next, I examine the size of inheritance. Column 5 uses the natural log of one plus the size of land inherited (in acres) as the dependent variable. The results mirror those from column 1 and suggest that females inherit a 26 percent larger plot of land after the reform.[11,12] These magnitudes are quantitatively similar to estimates in Deininger, Goyal, and Nagarajan (2013). The average value of land inherited is economically important, as it is twice as large as the average annual household income.

Columns 2 (and 6) investigate pre-trends in inheritance by including indicator variables *Death*, $t \in \{-5, -1\}$, *Death*, $t \in \{0, 5\}$, and *Death*, $t \geq 6$ for whether the household head had died in the six years leading up to the reform, the first five years after the reform, and beyond six years after the reform, respectively. Few observations in the years before and after the reform necessitate combining the yearly indicators into five-year bins, thus reducing noise in estimations. The coefficients in the pre-reform years are small and statistically insignificant thereby providing confidence in the validity of the parallel trends assumption.

Columns 3 (and 7) include additional controls for the marital status of the individual at the

[11]The REDS dataset contains limited information on the market value or purchase value of the land. Note that, even if the reform led to an unequal distribution (based on value or quality) among the siblings, this limitation would bias against me finding an effect of the reform.

[12]In Appendix Figure IA 1, I show that inheritance is a significant source of asset acquisition among households. In my sample, 70% of respondents report no change in inherited landholdings, while 84.4% report changes of less than 2 acres.

time of the reform, mother's education in years, father's education in years, father's landholding in acres, and whether an individual belongs to historically disadvantaged groups such as scheduled castes or scheduled tribes. The inclusion of additional controls increases the coefficient estimates.

To rule out unobserved time-varying factors driving the inheritance patterns among females, I repeat my baseline tests on the placebo sample of siblings from non-treated religious communities unaffected by the reform. Columns 4 (and 8) reports results from this exercise. I find no evidence of changes in the inheritance among women from non-treated communities around the reform, either in terms of economic magnitude or statistical significance, ruling out spurious correlation driving changes in inheritance. Given the limited number of individuals in this sample, I conduct several additional placebo tests using individuals from treated religious communities in the non-reforming states and with various cutoffs for the reform date. I discuss these and other alternative specifications in Section 8 and report the results in Table 9.

Overall, Table 1 suggests that the inheritance reform granting equal inheritance rights to women increased the inheritance of land among women.

4 Bridging the entrepreneurship gender gap

This paper investigates whether the inheritance reform offsets discriminatory social norms and narrows the gender gap in entrepreneurship. Apriori, it is not obvious that legal reforms granting women equal inheritance rights should affect entrepreneurship. On the one hand, theoretical models of poverty traps suggest that initial asset endowments can ease financial constraints and allow women to take advantage of investment opportunities (Banerjee and Newman, 1993; Galor and Zeira, 1993).[13] On the other hand, legal reform alone may not be effective in stimulating entrepreneurship in the presence of discriminatory social norms (Field, Jayachandran, and Pande, 2010; Benschop, 2002; UN-HABITAT, 2006; Watch, 2003; USAID, 2003). This section shows that the inheritance reform, which allowed women from treated communities to inherit land in equal proportions as men, increased business formation among women.

[13]Other evidence from experimental and non-experimental settings shows that asset transfers to women and in general to the poor support their entry into the non-agricultural sector (Blattman, Fiala, and Martinez, 2013; Bandiera, Burgess, Das, Gulesci, Rasul, and Sulaiman, 2017).

4.1 Empirical strategy

To test whether the reform led to substantial growth in women's entrepreneurship, I compare the evolution of business formation by women (relative to men) around the state-specific reform year. Specifically, I rely on the Census covering the universe of small and medium-sized businesses with information on the start date of the business, the gender, and the religion of the entrepreneur.

To understand changes in women's entrepreneurship around the reform, I estimate the following empirical specification at the individual business-level:

$$y_{ijst} = \alpha + \beta_1 \text{Treated}_i + \beta_2 \text{Post reform}_{st} \times \text{Treated}_i + \delta_{sj} + \omega_{jt} + \theta_{st} + \epsilon_{ijst} \quad (2)$$

y_{ijst} is a dummy variable taking the value of one (zero) for a business i started by a female (male) in a two-digit industry j, state s, in year t.[14] Note that the data is a snapshot of businesses that survived by the end of 2007 with the "t" in the equation capturing the year-of-incorporation.[15] $Post\ reform_{st}$ is an indicator variable if the year of the startup is greater than (or equal to) the state-specific reform year, i.e., it is the relative date of the founding firm with regards to the reform implementation date. $Treated_i$ refers to individuals belonging to the four religious communities - Hindus, Sikhs, Buddhists, and Jains - to which the inheritance reform applied, while other religious communities, serving as the control group, includes Muslims, Christians, Jews, and others, to which the inheritance reform did not apply.[16]

The empirical framework employs high-dimensional fixed effects to account for several confounds that can explain trends in women's entrepreneurship. First, state-industry fixed effects (δ_{sj}) control for unobserved time-invariant determinants of state-industry performance (e.g., natural endowments, location.). Second, industry-year fixed effects (ω_{jt}) control for industry-specific time effects (e.g., industry-specific shocks such as technological innovation). Lastly, state-year

[14]The main focus of the analyses is on new business formation among entrepreneurs because of data limitations. While the intensive margin is interesting, it is unclear whether we expect to see an effect of relaxing financial constraints for entrepreneurs who could already start a business even before the reform. We would expect these entrepreneurs to differ along multiple dimensions (such as quality, business network, etc.) from the credit constrained marginal women entrepreneurs for whom this reform relaxes financial constraints.

[15]The non-panel nature of the data structure do not allow for the usage of new estimators and adjustments proposed in the recent literature on difference-in-differences (Goodman-Bacon, 2021; Callaway and Sant'Anna, 2020; Sun and Abraham, 2020; De Chaisemartin and d'Haultfoeuille, 2020).

[16]The inclusion of *Treated* dummy controls for differences in the propensity of becoming entrepreneurs across treated and control groups.

fixed effects (θ_{st}) control for state-specific time effects (e.g., regional macroeconomic shocks).

The inclusion of the fixed effects ensures that the empirical specification exploits information on the timing of business formation relative to the state-specific reform year, with the coefficient of interest (β_2) being identified by the mix of religion and state-year variation in the passage of the inheritance reform. I cluster standard errors at the state-year level in case idiosyncratic factors exist that are specific to businesses within each state-year pair. This approach assumes that idiosyncratic factors related to the decision to start new businesses within each state-year are uncorrelated with errors of other state-year pairs.

Furthermore, the richness of the data and the fact that the reform affected women from specific religious groups but not others allow me to rule out concerns regarding time trends in religion and gender driving observed changes in women's entrepreneurship. Specifically, to mitigate concerns that differential trends between treated and untreated religious communities could drive the observed effects, I focus on the subsample of entrepreneurs from the treated religious communities comparing entrepreneurs of the same religion but different gender. As the subsample includes only entrepreneurs, to include state-year fixed effects, I re-organize the individual business data at a more aggregate level. Within each state-industry-year cell, I compute the fraction of female and male entrepreneurs from treated religious communities allowing me to estimate the following specification:

$$y_{jst} = \alpha + \beta_1 \text{Female}_{jst} + \beta_2 \text{Post reform}_{st} \times \text{Female}_{jst} + \delta_{sj} + \omega_{jt} + \theta_{st} + \epsilon_{jst} \tag{3}$$

Additionally, to rule out divergent trends between males and females driving the observed effects, I focus on the subsample of women entrepreneurs comparing entrepreneurs of the same gender but different religions. As before, the subsample includes only entrepreneurs, and hence to include state-year fixed effects, I re-organize the individual business data at an aggregate level. Within each state-industry-year cell, I compute the fraction of female entrepreneurs belonging to treated and untreated religious communities allowing me to estimate the following specification:

$$y_{jst} = \alpha + \beta_1 \text{Treated}_{jst} + \beta_2 \text{Post reform}_{st} \times \text{Treated}_{jst} + \delta_{sj} + \omega_{jt} + \theta_{st} + \epsilon_{jst} \tag{4}$$

In conclusion, given the staggered nature of the reform across states, the empirical approaches

are attractive because they effectively control for time-varying macroeconomic conditions that are likely to impact the decision to become an entrepreneur. Additionally, as the reform applied only to women from specific religious groups, it allows me to use men from treated religious communities and women from untreated religious communities as control groups to rule out concerns regarding religion-specific and gender-specific time trends affecting the propensity to become an entrepreneur.

4.2 Results

Table 2 reports baseline regression results estimating Equation 2. Columns 1 and 2 present results for all states, while columns 3 and 4 present results for the early reforming states to be consistent with the inheritance sample. Column 1 includes the *Treated* dummy and its interaction with the *Post reform* dummy, along with industry-year fixed effects that control for industry-specific time effects.

The results suggest that, after the reform, the yearly number of new firms by women increased by a significant proportion. Column 2 shows that the point estimates increase upon the inclusion of state-industry fixed effects that control for unobserved time-invariant determinants of state-industry performance. In terms of economic magnitude, the coefficient estimate suggests that after the reform, the yearly number of new women enterprises increased by 16%, equivalent to a 5% reduction in the gender gap among entrepreneurs.[17] In columns 3 and 4, when focusing on early reforming states, I find that the coefficient estimates are similar to estimates in columns 1 and 2, which focuses on all states. One interpretation of this finding is that cross-state differences across early and late adopting states do not drive heterogeneity in treatment effects.

To rule out religion-specific trends as an explanation, panel A of Appendix Table IA3 focuses on the subsample of entrepreneurs from the treated communities and exploits variation across gender and the timing of reform, as in Equation 3. Similarly, panel B of Appendix Table IA3 rules out gender-specific trends as an explanation by focusing on the subsample of women entrepreneurs and exploits variation across religions and the timing of the reform, as in Equation 4. Across both specifications, I find that female entrepreneurship among the treated communities

[17]Before the reform, 11% of the entrepreneurs are women, equivalent to a 39% gender gap. After the reform, 12.7% are women, equivalent to a gender gap of 37.3%. Hence, the reduction in the gender gap is approximately 5% (1.7%/37.3%).

drives the baseline increase in female business formation.

Further, to rule out state-industry trends that may vary over time, in Section 8, I show that the baseline results are robust to the inclusion of state-industry-year fixed effects. This stringent test effectively rules out concerns about differential trends in business formation that could instead drive the observed increase in female entrepreneurship rates. Lastly, Appendix Table IA4 presents evidence of a larger treatment effect in districts where women from treated religious communities inherit more land identified using the inheritance dataset. This result is the most direct evidence consistent with larger inheritances associated with greater increases in business formation rates around the inheritance reform.

4.3 Discussion of the identifying assumptions

The empirical strategy entails two main concerns. The first concern relates to differential pre-trends in business formation rates. To understand whether this concern drives the results, I examine pre-trends in female entrepreneurial activity around the reform.

Panel A of Figure 2 plots the evolution of business formation among treated women relative to all entrepreneurs after controlling for the year-of-incorporation fixed effects. These fixed effects control for time trends in business formation. The coefficients are obtained from estimating a regression where the dependent variable – is an indicator for whether a business was started by a female entrepreneur from the treated community – on a set of event-year dummy variables normalized to the immediate year before the reform. Panel B focuses on the subsample of entrepreneurs from the treated religious communities and examines the change in business formation among women relative to men, comparing across gender but holding constant religion-specific factors. Across both specifications, I find that the coefficients in the years leading up to the reform are economically small and not statistically significant. Thus, there is no evidence of pre-trends in business formation.

Importantly, the figures assuage atleast two concerns. First, the absence of significant effects before the reform implies that women who enter into self-employment do not anticipate the reform. Second, the fact that entrepreneurial activity increases only after the reform suggests that this relationship is not the result of state lawmakers responding to vagaries of economic

conditions (an omitted variable) or increases in female entrepreneurship rates (reverse causality). The key is that the effect of the reform is increasing over time which is consistent with parental deaths and inheritances increasing over time.

The second concern relates to the documented increase coming from lower relative business formation rates among men. The idea is that changes in inheritance laws imply that men have less capital in households with mixed-gender sibling composition, leaving them with lower capital than women to start businesses. If this is the case, then lower business formation rates among men rather than an increase in the female entrepreneurship rates might explain the results.

To address such a concern, Appendix Figure IA 3 plots the evolution of business formation among men in event-time after controlling for year-of-incorporation fixed effects. The coefficients are obtained from estimating a regression where the dependent variable – is an indicator for whether a business was started by a male entrepreneur from the treated religious community – on a set of event-year dummy variables normalized to the immediate year before the reform. The coefficients on the event-time dummy variables before and after the reform are economically small and not statistically significant. In Section 7, I provide further evidence that the reform did not negatively affect the aggregate entrepreneurial activity by crowding out male entrepreneurs.

Overall, these tests provide assurance that the baseline relative increase in business formation rates indeed comes from an increase in female entrepreneurship rates.

5 Discussion of mechanisms

So far, the results show that equal inheritance rights for women led to substantial growth in female entrepreneurship. Next, I turn to understand the mechanisms that underlie the results. Specifically, I consider three mechanisms. First, the inheritance reform potentially relaxes financial constraints by providing women access to collateral. Second, higher wealth or expected wealth could increase human capital accumulation among women, thus increasing business formation rates. Third, higher wealth or expected wealth could affect risk-taking and hence alter occupational choice and encourage entry into entrepreneurship. Across several tests, I find evidence most consistent with the inheritance reform relaxing financial constraints, thus allowing women to start new businesses.

5.1 Financial constraints

A sizeable theoretical and empirical literature highlights the importance of access to financing for individuals to alter their production and employment choices (Aghion and Bolton, 1997; Banerjee and Newman, 1993; Kerr and Nanda, 2011). Therefore, this section investigates whether the inheritance reform relaxes financial constraints by providing women access to collateral. Consistently, I present two pieces of evidence to suggest that relaxation of financial constraints drives the increase in business formation among women.

5.1.1 Heterogeneous treatment effects by financing needs

I begin by examining the business formation rates by the financing required to start a business. If collateral in the form of inherited land indeed relaxes financial constraints for women, then the increase in entrepreneurial activity is likely highest in industries where startup capital requirements are high. In industries where startup capital requirements are low, the effect will be more moderate as entry costs are lower. Motivated by this observation, I examine whether the reform increases entrepreneurship in high startup capital industries more than in low capital startup industries.

To do so, I focus on the subsample of entrepreneurs from treated religious communities to assuage concerns regarding religion-specific differences in the use of financing for entrepreneurship. Moreover, as before, the empirical specification flexibly controls for time-varying factors across states and industries affecting the use of financing and growth in female entrepreneurship. Table 3 reports results from this exercise. Panel A reports heterogeneity based on required startup capital, while panel B uses the financial dependence index from Rajan and Zingales (1998). The financial dependence index is an industry-level measure to capture approximately a firm's intrinsic demand for external finance. Columns 1 and 2 in both panels present results for all states, while columns 3 and 4 in both panels present results for the early reforming states. Industries are classified as *High* if their purchase value of plant and machinery in the pre-treatment period is in the top tercile or quartile of the distribution. In both panels, columns 1 and 3 present results based on the tercile measure, while columns 2 and 4 present results based on the quartile measure. The sample is restricted to business owners from treated religious communities. Addi-

tionally, panel B restricts the sample to manufacturing industries, given that the index measure is only available for manufacturing.

Across both panels, the estimates suggest that the increase in female business formation rates is larger in industries with greater financing needs. This evidence is consistent with the view that women entrepreneurs gain access to financing through collateral after the reform, allowing them to enter into capital-intensive industries.

5.1.2 Identifying the financing channel: Bank branching expansion

In this subsection, I provide additional tests confirming the role of access to finance in explaining growth in female entrepreneurship around the inheritance reform. Specifically, I study changes in business formation among women from treated religious communities around exogenous bank entry in different geographical regions. As previously unbanked regions see an increase in bank entry, it could allow inherited land to be pledged as collateral, thereby relaxing financial constraints for the marginal entrepreneur.[18] If this is the case, one would expect a larger increase in female business formation rates in regions with exogenous bank presence relative to other regions.

To study whether this is indeed the case, I use an instrumental variables approach which exploits exogenous variation in bank entry into different geographical regions.[19] Burgess and Pande (2005) find that the state-led rural bank branching expansion led to a significant increase in credit availability to rural households and reduction in rural poverty. The policy was instituted by the Indian Central Bank in 1977 and remained in place until 1990.[20] It mandated that a bank must open branches in four eligible unbanked locations if it wanted to obtain a license for opening a bank branch in an already banked location (i.e., with one or more branches).

The research design exploits the policy-driven nature of the program, which required banks to open bank branches in unbanked rural locations. I begin by showing that between 1977 and 1990, rural bank branching expansion was significantly higher in less financially developed states. I exploit the trend reversals and deviations introduced by the bank branching policies.

[18] Alternatively, if the marginal entrepreneur decides to sell the inherited land, bank presence may facilitate the use of cash proceeds for equipment purchase, and working capital needs, among others.

[19] This strategy has most notably used in Burgess and Pande (2005). The empirical strategy used here is similar in spirit to bank deregulation in the U.S. (Jayaratne and Strahan, 1996; Black and Strahan, 2002).

[20] Given the timing of this program, I'm able to exploit this variation among four out of early reforming states.

The crucial identifying assumption is that other state-level economic or political factors do not exhibit the same trend reversal as the policy. Burgess and Pande (2005) show that this assumption holds.

I adopt a linear trend break model that closely resembles the actual trend reversals in bank branching expansion (Burgess and Pande, 2005). Specifically, I estimate the following first stage model (Equation 5) and second stage model (Equation 6):

$$B_{st}^{R} = \alpha_s + \omega_t + \beta_1(B_{s1961} \times [t - 1961]) + \beta_2(B_{s1961} \times [t - 1977]) + \beta_3(B_{s1961} \times [t - 1990]) + \beta_4(B_{s1961} \times P_{1977}) + \beta_5(B_{s1961} \times P_{1990}) + \epsilon_{st} \quad (5)$$

α_s and ω_t represent state and year fixed effects which account for time-invariant differences across states and national level trends which may affect branch expansion. [t-1961], [t-1977], and [t-1990] are linear time trends, which switch on in 1961, 1977, and 1990, respectively. They enter the regression interacted with a measure of a state's initial financial development, B_{s1961}. P_{1977} and P_{1990} are dummy variables which equal one from 1977 and 1990, respectively. I cluster standard errors at the state level in case there are idiosyncratic factors specific to states exist (Bertrand, Duflo, and Mullainathan, 2004). Appendix Table IA5 reports the results of the first-stage regression, as laid out in Equation 5, establishing that rural branch expansion associated with the branch licensing policy increased credit disbursement in rural India.

The second stage regression examining the impact of access to finance through rural bank branching takes the following form:

$$\mathrm{y}_{st} = \alpha_s + \omega_t + \phi B_{st}^{R} + \kappa \text{Post reform}_{st} + \lambda(\text{Post reform}_{st} \times B_{st}^{R}) + \eta_1(B_{s1961} \times [t - 1961]) + \eta_2(B_{s1961} \times [t - 1977]) + \eta_3(B_{s1961} \times [t - 1990]) + \eta_4(B_{s1961} \times P_{1977}) + \eta_5(B_{s1961} \times P_{1990}) + \epsilon_{st} \quad (6)$$

The dependent variable y_{st} is the state-level fraction of women entrepreneurs that belong to the treated religious group each year and *Post reform*$_{st}$ is an indicator variable for post reform years. Clustering at the state-level is problematic as too few clusters lead to over-rejection of the null hypothesis (Cameron, Gelbach, and Miller, 2008). Therefore, I resort to other clustering

refinements for inference.

Table 4 reports the instrumental variables estimates for the specification laid out in Equation 6. Columns 1 and 2 adopt clustering at the state level to account for correlations across observations within the states. Columns 3 and 4 adopt cluster-robust standard errors that permit heteroscedasticity, while columns 5 and 6 use cluster bootstrap-t procedures to estimate standard errors. Estimates in column 1 suggest that in the pre-reform period, branch openings in rural unbanked locations are weakly negatively associated with female entrepreneurship. However, the interaction term is positive and statistically significant, suggesting that rural branch openings had a positive effect on female entrepreneurial activity after the inheritance reform (p-value=0.042).

These results of the increase in business formation around bank entry could also be explained by supply-side considerations but are still consistent with relaxing financial constraints made possible by the inheritance reform allowing women access to collateral. First, it could be that formal finance is more gender-neutral, and hence bank entry leads to an increase in gender-neutral finance for women, who now have access to collateral, allowing them to tap into the newly available bank credit. Second, bank entry might correlate with unobserved investment opportunities, increasing land values in nearby areas. If this is the case, increases in credit supply due to increases in collateral value can plausibly explain the increase in business formation. Unfortunately, the granularity of the bank branching data does not allow for disentangling between these two explanations.

5.2 Human capital investments

Another potential mechanism could be that higher wealth or expected wealth could increase investments in human capital for women, thereby explaining the increase in female entrepreneurship around the inheritance reform. Recent work points to an increase in human capital accumulation after the reform through empowerment among second-generation women (Roy, 2008; Deininger, Jin, Nagarajan, and Xia, 2019). Thus, if the inheritance reform indeed altered investments in human capital, then the increase in entrepreneurship is likely greatest in industries that require more significant investments in human capital. In contrast, female entrepreneurship rates are likely to be low in industries requiring smaller human capital investments, as entry costs are

lower. Motivated by this observation, I examine whether the reform increases entrepreneurship in large human capital investment industries more than in smaller ones.

To do so, I classify industries based on human capital intensity following Ciccone and Papaioannou (2008). The industry-level measure captures differences in the intrinsic use of human capital. As before, I focus on the subsample of business owners from treated religious communities and restrict businesses in the manufacturing industries as the index measure is only available for these industries. Focusing on entrepreneurs from treated religious communities allows me to control for religion-specific differences in human capital investments. Moreover, the empirical specification flexibly controls for cohort-specific factors that vary across states and industries, affecting the decision to invest in human capital and entry into entrepreneurship.

Appendix Table IA6 presents results examining the heterogeneity in female entrepreneurship based on human capital intensity. The table shows that the business formation rates are similar across industries with differing levels of human capital intensity, and the estimates are economically small and statistically insignificant. These results do not support the view that human capital accumulation among women entrepreneurs drives the increase in business formation after the reform.

5.3 Changes in risk-taking

I also consider an alternative mechanism distinct from the channels discussed above. One possibility is that income effects make individuals more likely to start a business after they receive or expect to receive a lump-sum transfer. Thus, the inheritance reform changes women's attitudes towards risk, and hence inheriting a property affects entrepreneurship, which is considered a risky prospect (Moskowitz and Vissing-Jørgensen, 2002; Hall and Woodward, 2010). If this is the case, one expects new female businesses to be riskier than new male businesses. Following prior work, Andersen and Nielsen (2012), I use business closure as a proxy for riskiness. In Section 7.1, I find that new female businesses are less likely to be closed, evidence that is inconsistent with the risk-taking channel.

Note that neither a unitary nor the benchmark version of a collective household model would predict that the woman receiving inheritance would increase entrepreneurship. A unitary house-

hold model predicts that the source of income does not matter, whereas a benchmark collective model predicts that the inheritance raises the woman's Pareto weight, which would increase her leisure, so she is less likely to start a business (Heath and Tan, 2019; Field, Pande, Rigol, Schaner, and Troyer Moore, 2021; De Mel, McKenzie, and Woodruff, 2009). Contrary to these predictions, the baseline results show an increase in female entrepreneurship. Further, changes in intrahousehold bargaining around the inheritance reform cannot explain the more significant increase in business formation in capital-intensive industries and regions with exogenous bank branch entry.

Overall, the evidence presented in this section is most consistent with financial inclusion being the primary driver for the observed increase in female entrepreneurship rates.

6 Heterogeneous treatment effects by discriminatory social norms

Evidence from the previous sections is consistent with the prediction that entrepreneurship responds to easing financial constraints through the inheritance reforms (Holtz-Eakin, Joulfaian, and Rosen, 1994a). However, discriminatory social norms, such as disapproval of women working outside the home, may weaken or even sever this link for women (Field, Jayachandran, and Pande, 2010; Jayachandran, 2021b,a; Bursztyn, González, and Yanagizawa-Drott, 2020). Further analysis tests and confirms the hypothesis that discriminatory social norms moderates the effect of the reform by reducing business formation rates among women.

To identify social norms that are discriminatory towards women, I use the number of "missing women." Sen (1992) argues that as many as 100 million women could be missing in India. Gender bias and mistreatment of young girls are the candidate explanations for this phenomenon. Thus, regions with more missing women can proxy for more significant discrimination against women.

Table 5 reports results examining heterogeneity in treatment effects by social norms using this measure. Districts are classified as *Low discrimination* if the number of estimated missing women (Anderson and Ray, 2010), computed as the difference between the actual number of women per 1000 men minus the counterfactual number of women per 1000 men, is in the top tercile and quartile of the distribution. Columns 1 and 3 present results for the tercile measure, while columns 2 and 4 present results for the quartile measure. The sample is restricted to business owners from treated religious communities, to rule out religion-specific differences.

Across the columns, districts where women face low discrimination, experienced a significant increase in business formation by women relative to men. These effects are stronger in early reforming states. Further, in Appendix Table IA7, I rule out that rural areas in my sample drive these effects. Note that the inclusion of fixed effects in these estimations control for measures of development that might be correlated with the proxy for discrimination, thus assuaging concerns about differential trends in development as an explanation for these results.

These findings highlight that, on average, the reform relaxes financial constraints for the marginal woman entrepreneur, while at the same time, discriminatory social norms work against the reform. These results have important aggregate implications. On the one hand, if countries with low discriminatory social norms implement the inheritance reforms, one can expect an increase in aggregate entrepreneurial activity driven by the increase in female business formation. On the other hand, in extreme cases, if countries with high levels of discriminatory social norms implement the inheritance reforms, one can expect a decrease in the aggregate entrepreneurial activity driven by a decrease in female business formation.

These results are important for policymakers, given their implications for labor supply decisions and aggregate entrepreneurship, potentially affecting economic growth (Bursztyn, González, and Yanagizawa-Drott, 2020; Chiplunkar and Goldberg, 2021; Jayachandran, 2021b).

7 Aggregate effect of the reform

The findings establish an increase in female business formation rates around the inheritance reform. However, the analysis is silent on the aggregate effect of the reform, especially given its redistributive nature. At the same time, the data do not allow for welfare analysis for several reasons. First, the inability to observe the counterfactual males from the treated religious communities some of whom are potentially crowded out because of the reallocation of land from males to females makes welfare analyses challenging. Second, the reform has the effect of redistributing assets among some heirs, especially in households composed of mixed-gender children. Hence, the net effect on aggregate activity will crucially depend on the assumptions on whether the effect of the inherited land on the propensity to start a business is linear and downward sloping. Lastly, prior work studying the same reform shows that it increases female foeticide

and domestic violence, making it challenging to derive welfare implications on the overall effects of inheritance laws in India. However, in the context of entrepreneurship, I present evidence suggesting an overall positive impact of the reform.

7.1 Quality of the marginal women entrepreneur

First, I estimate the average quality of the marginal woman entrepreneur under the assumption that differences in quality will show up as differences in firm outcomes relative to male entrepreneurs, as measured by performance. If the primary effect of the reform was to draw in women with lower ability, then the startups created after the reform should be less likely to create jobs and more likely to perform poorly. Alternatively, if the reform drew in women with higher abilities, the startups should be as likely as before to create jobs and perform. As before, I focus on the subsample of entrepreneurs from the treated religious communities to rule out religion-specific differences in performance as an explanation for the findings.

I use two proxies for firm quality: closure rates and performance. Table 6 reports results examining closure rates while Appendix Table IA8 reports results examining performance. Columns 1 and 2 present results for all states, while columns 3 and 4 present results for the early reforming states. Column 1 (and 3) includes the *Female* dummy and its interaction with *Post-reform* dummy along with high-dimensional fixed effects similar to our main empirical strategy as in Equation 2. The dependent variable is an indicator variable for business closure, which takes the value of one if the business is closed anytime during its operation from inception until the survey. Note that the entrepreneurship dataset contains information on all surviving businesses, and hence the closure rates capture the operational performance of the business.[21]

The coefficient on *Female* dummy is informative of the pre-reform average closure rates for female businesses. The estimates from column 1 (column 2) suggest that before the reform, on average, businesses of women from treated religious communities experienced 1% (0.7%) higher operational closure than males from the treated religious communities. The interaction term is

[21]The business closure does not systematically vary across religion, gender, and or state-specific reform year. Also, note that the quality measures are not observed for women who are forced to (or choose to) remain out of self-employment. Moreover, the survivorship in the dataset biases against me finding the results. Specifically, if women from treated religious communities are more likely to start a poor-performing business that closes by the end of the sample, then the estimations will suffer from a downward bias, and I am less likely to find an effect of the inheritance reform.

informative on how the closure rates differ among new enterprises started by women after the reform relative to other enterprises. The negative coefficient on the interaction term suggests that new female businesses exhibit a lower probability of closure than other enterprises. Further, the joint test confirms that the better performance of female enterprises relative to male enterprises is statistically significant. Columns 3 and 4 show that the effect also exists among enterprises in the early reforming states. Results on performance in Appendix Table IA8 mirror the results on closure rates.

Overall, these results suggest that the main effect of the reform was to draw in females with higher ability, and these new businesses by women perform better in comparison to male businesses. Although these results are encouraging, in the absence of data on owner characteristics, I cannot rule out differences in risk aversion driving the differences in performance.

7.2 Aggregate entrepreneurial activity

Second, I evaluate the effect of the inheritance reform on aggregate entrepreneurial activity. Apriori, its effects on aggregate entrepreneurial activity are unclear. On the one hand, the reform led to reallocation from males to females for mixed-gender sibling households, resulting in lower inheritance for some males. Thus, such a loss in inheritance may negatively affect business formation by males driving a decline in the overall entrepreneurial activity. On the other hand, the reform might not affect overall entrepreneurial activity as male entrepreneurs from treated religious communities may have access to other sources of finance.

To investigate the effect on overall entrepreneurial activity, Table 7 compares business formation rates across the treated and non-treated religious communities. I collapse the data at an aggregate level to include state x year fixed effects, such that I compare business formation rates within state each year. Thus, for each state-industry-year cell, I compute the total new businesses incorporated each year scaled by the regional population. I include high-dimensional fixed effects to control for confounds that can explain the growth in aggregate entrepreneurial activity. The coefficient on the *Treated* indicator is positive and statistically significant, indicating religion-specific differences in business formation. Post reform, overall business formation rates are higher among entrepreneurs from the treated religious communities. These results show that

the reform led to an increase in overall business formation among the treated. Thus, on average, any reallocation from males to females caused by the reform did not dampen the overall entrepreneurial activity.

In further tests, I mitigate concerns regarding changes in entrepreneurial activity among men or spillover effects on non-treated religious communities that might instead explain the growth in aggregate entrepreneurship. In Appendix Figure IA 3, I find no differential change in business formation among male entrepreneurs from treated religious communities relative to male entrepreneurs from untreated religious communities. Additionally, in unreported tests, I use aggregate entrepreneurial activity at the state level as an outcome and identify the effect using only variation in the reform across state and time. Across specifications, I find an increase in aggregate entrepreneurial activity.

Overall, the results in this section suggests that the inheritance reform did not dampen the aggregate entrepreneurial activity. As noted before, while the identification strategy is quite attractive in disentangling macroeconomic confounds from the effect of the reform, the data do not allow for welfare analysis. However, in the context of entrepreneurship, the inheritance reform did have an overall positive effect without worsening the quality of the new enterprises.

8 Alternative interpretations and robustness

8.1 Alternative interpretations

Results so far are consistent with inheritance reforms relaxing financial constraints for the marginal woman entrepreneur. In the absence of data, however, on the household structure of the enterprise owner and the distinction between the owner and the operator of the businesses, women could act as a proxy for males within the household. This concern stems from the findings that business decisions are made in the context of available opportunities and constraints within their household and not merely their enterprise (Bernhardt, Field, Pande, and Rigol, 2017; De Mel, McKenzie, and Woodruff, 2010, 2009). To mitigate these concerns, I examine whether female and male entrepreneurs enter similar industries.

I begin by plotting female entrepreneurship rates in each industry. Figure 3 plots the coefficients and 95% confidence intervals from estimating a regression – where the dependent variable

is an indicator variable for whether a business was started by a female – on dummy variables for each two-digit industry classification. The circles and triangles are coefficient estimates, relative to agriculture, on dummies from estimating separate regressions for pre-reform and post-reform periods, respectively.

More formally, I compare business formation across industries based on the most representative gender of an industry. To do so, I classify an industry as *female-dominated* if the share of female entrepreneurs within that industry in the pre-treatment period is in the top tercile or quartile of the distribution. Table 8 shows that across both measures, there is an increase in female business formation that is larger in female-dominated industries relative to male-dominated industries.[22] Additionally, in Appendix Table IA9, I find that new female enterprises, relative to new male enterprises, employ more women and fewer men by the end of the sample period. These results on segregation of the employment bases by the gender of business owners suggest that policies aiming to reduce gender inequality can have spillover effects and raise female labor force participation, a growing concern in the context of emerging economies (Fletcher, Pande, and Moore, 2017; Jayachandran, 2021b).

A plausible explanation for the increase in entry into female-dominated industries could be that increases (or expected increases) in wealth from inheritances for women from treated religious communities may increase their consumption. If this were the case, increased demand for products from these women could increase entrepreneurship in a female-dominated industry. To investigate this possibility, in Appendix Table IA10, I restrict the sample of entrepreneurs to untreated religious communities and find no differential change in business formation in female-dominated industries around the reform. Thus, changes in demand for products in female-dominated industries cannot explain the results.

Lastly, as most analyses focus on the universe of formal businesses from the Census, an additional concern could be that the effects identified may be capturing an increase in registered businesses but not the creation of new businesses. Put differently, due to the reform, unregistered female-owned enterprises may become more likely to be registered. To address such a concern,

[22]These results also mitigate the possibility that inheritance of the enterprise itself drives the observed increase in female business formation. If females inherited businesses from male household heads instead of starting new businesses, then one would expect female entrepreneurship rates to be larger in male-dominated industries than in female-dominated industries.

I rely on the sample of unregistered businesses in the informal/unorganized sector surveyed by the Census. Appendix Table IA11 shows an increase in entrepreneurship among women from treated religious communities, even in the informal sector, suggesting that the baseline results are not driven by an increase in registration but an increase in overall female entrepreneurship.

In summary, the results presented in this section rule out several alternative interpretations and mitigate concerns to establish that the inheritance reform led to increased business formation among women from treated religious communities.

8.2 Robustness to alternative specifications

This section considers the robustness of the main results to alternative empirical specifications. Table 9 reports key results for several alternative specifications of the main analysis. Panel A reports tests examining the effect of the reform on inheritance among women. The dependent variable is the natural logarithm of one plus total inherited land (measured in acres). Column 1 of Table 9 reports results from Table 1 for ease of comparison.

First, I examine whether the key findings of this paper are robust to the exclusion of Kerala which passed a slightly different amendment in the form of the Kerala Joint Hindu Family System (Abolition) Act. Column 2 shows that the results are robust to the exclusion of Kerala. Next, I address concerns that idiosyncratic factors are correlated within a village instead of the household because communities at the village-level impose and defend social norms. Column 3 shows that even though the standard errors are larger compared to the baseline, the point estimates are statistically significant at the 1% level. In addition, households in non-reform states might serve as a better control group to capture macroeconomic unobservables. Thus, column 4 includes households from non-reforming states and finds attenuation in the point estimates. Further, in column 5, I also show robustness to measurement by using the share of land inherited as the dependent variable, yielding a point estimate of 3.7 basis points (p-value=0.009).

Furthermore, to rule out concerns relating to omitted factors that might affect females and males differentially and, thereby, the outcomes of interest, I conduct additional tests by limiting the sample to women and comparing across and within the states. Column 6 finds a consistent effect of the inheritance reform among women from treated religious communities across early

reforming and late reforming states, while column 7 finds no effect among women from non-treated religious communities.

Lastly, in columns 8 through 11, I check for inheritance patterns among women from treated religious communities in late reforming states around state-specific reform dates. Across the various specifications, I find no evidence of changes in the inheritance among women around the reform in late states, either in terms of economic magnitude or statistical significance, indicating that the spurious correlation is not driving changes in inheritance.

In panel B, I examine alternative specifications for female entrepreneurial activity around the reform. The panel presents results from estimations, which include high-dimensional fixed-effects. Mainly, it compares female business formation rates among the treated within the same state, industry, and year, thus effectively controlling for industry conditions within each state and year that might affect the propensity to become an entrepreneur. Additional results in Appendix Table IA3 suggest that the increase in entrepreneurship among the treated and not religion-specific or gender-specific trends drive the baseline increase in female business formation.

As the next step, I examine whether any particular reform drives the baseline results. Appendix Table IA12 suggests that the estimates are robust to examining the treatment effects independently around each reform year. Interestingly, the coefficient on the interaction term is the smallest for Kerala because it had a matrilineal inheritance system for centuries. Thus, I interpret the estimates for Kerala as confirmatory evidence of the inheritance reform having a positive effect on marginal women who previously were unable to inherit.Lastly, to account for spillover effects across religious communities, in Appendix Table IA13, I only exploit variation at the state level and show that the baseline increase in female entrepreneurship rates is robust to any spillover effects.

In conclusion, the results from the alternative specifications are consistent with the baseline results, documenting a reduction in the gender gap in entrepreneurship.

9 Conclusion

The gender gap in employment, education, and many other domains has declined considerably over the last century, but a significant gender gap in entrepreneurship remains. This gap in

business formation directly translates to a difference in business leadership which is detrimental to growth. Hence, identifying and implementing effective policies to increase women's economic activity could significantly impact economic growth. This paper investigates one such source of gender inequality: discriminatory laws such as unequal inheritance rights that prevent women from owning assets.

In this paper, I examine the effects of statutory law reform, granting women from specific religious groups inheritance rights equal to men's, on the growth of female entrepreneurship in India. Using the universe of new businesses and exploiting variation in inheritance rights across religious groups and gender, I show that these reforms increase business formation by women relative to men. Moreover, the evidence is consistent with a financing mechanism driving this effect, wherein after the reform, the marginal female entrepreneur has collateral to access financing. An instrumental variables strategy, which exploits exogenous variation in bank entry into different geographical regions, corroborates that financial inclusion is the primary driver for increasing women entrepreneurship rates. However, I find that discriminatory social norms work against the inheritance reform with lower female entrepreneurship rates in regions where women face higher discrimination. Despite these opposing norms, the reform increased aggregate entrepreneurial activity without crowding out male business formation. Overall, these findings highlight that legal recognition of women's inheritance rights is beneficial in narrowing the entrepreneurship gender gap in the face of persistent deep-rooted social norms.

References

Acemoglu, Daron, and James A Robinson, 2021, Culture, Institutions and Social Equilibria: A Framework, Technical report, National Bureau of Economic Research.

Adelino, Manuel, Antoinette Schoar, and Felipe Severino, 2015, House prices, collateral, and self-employment, *Journal of Financial Economics* 117, 288–306.

Agarwal, Bina, 1994, *A field of one's own: Gender and land rights in South Asia*, volume 58 (Cambridge University Press).

Aghion, Philippe, and Patrick Bolton, 1997, A theory of trickle-down growth and development, *Review of Economic Studies* 64, 151–172.

Alesina, Alberto, and Paola Giuliano, 2014, Family ties, in *Handbook of economic growth*, volume 2, 177–215 (Elsevier).

Alesina, Alberto, Paola Giuliano, and Nathan Nunn, 2013, On the origins of gender roles: Women and the plough, *The quarterly journal of economics* 128, 469–530.

Andersen, Steffen, and Kasper Meisner Nielsen, 2012, Ability or finances as constraints on entrepreneurship? evidence from survival rates in a natural experiment, *Review of Financial Studies* 25, 3684–3710.

Anderson, Siwan, and Garance Genicot, 2015, Suicide and property rights in India, *Journal of Development Economics* 114, 64 – 78.

Anderson, Siwan, and Debraj Ray, 2010, Missing women: age and disease, *Review of Economic Studies* 77, 1262–1300.

Ardagna, Silvia, and Annamaria Lusardi, 2008, Explaining international differences in entrepreneurship: The role of individual characteristics and regulatory constraints, Technical report, National Bureau of Economic Research.

Ashraf, Nava, Natalie Bau, Nathan Nunn, and Alessandra Voena, 2020, Bride price and female education, *Journal of Political Economy* 128, 591–641.

Ayres, Ian, and Peter Siegelman, 1995, Race and gender discrimination in bargaining for a new car, *American Economic Review* 304–321.

Bandiera, Oriana, Robin Burgess, Narayan Das, Selim Gulesci, Imran Rasul, and Munshi Sulaiman, 2017, Labor markets and poverty in village economies, *Quarterly Journal of Economics* 132, 811–870.

Banerjee, Abhijit V, and Andrew F Newman, 1993, Occupational choice and the process of development, *Journal of Political Economy* 101, 274–298.

Bau, Natalie, 2021, Can policy change culture? government pension plans and traditional kinship practices, *American Economic Review* Forthcoming.

Becker, Anke, 2020, Pastoralism and female entrepreneurship, *Unpublished manuscript* .

Benschop, Marjolein, 2002, *Rights and reality: are women's equal rights to land, housing and property implemented in East Africa?* (UN-HABITAT).

Bernhardt, Arielle, Erica Field, Rohini Pande, and Natalia Rigol, 2017, Household matters: Revisiting the returns to capital among female micro-entrepreneurs, Technical report, National Bureau of Economic Research.

Bertrand, Marianne, Esther Duflo, and Sendhil Mullainathan, 2004, How much should we trust differences-in-differences estimates?, *Quarterly Journal of Economics* 119, 249–275.

Bhalotra, Sonia, Rachel Brulé, and Sanchari Roy, 2020, Women's inheritance rights reform and the preference for sons in india, *Journal of Development Economics* 146, 102275.

Black, Sandra E, and Philip E Strahan, 2002, Entrepreneurship and bank credit availability, *Journal of Finance* 57, 2807–2833.

Blattman, Christopher, Nathan Fiala, and Sebastian Martinez, 2013, Generating skilled self-employment in developing countries: Experimental evidence from Uganda, *Quarterly Journal of Economics* 129, 697–752.

Burgess, Robin, and Rohini Pande, 2005, Do rural banks matter? Evidence from the Indian social banking experiment, *American Economic Review* 95, 780–795.

Bursztyn, Leonardo, Alessandra L González, and David Yanagizawa-Drott, 2020, Misperceived social norms: Women working outside the home in saudi arabia, *American economic review* 110, 2997–3029.

Buttner, E Holly, and Benson Rosen, 1989, Funding new business ventures: Are decision makers biased against women entrepreneurs?, *Journal of Business Venturing* 4, 249–261.

Callaway, Brantly, and Pedro HC Sant'Anna, 2020, Difference-in-differences with multiple time periods, *Journal of Econometrics* .

Cameron, A Colin, Jonah B Gelbach, and Douglas L Miller, 2008, Bootstrap-based improvements for inference with clustered errors, *Review of Economics and Statistics* 90, 414–427.

Chiplunkar, Gaurav, and Pinelopi K Goldberg, 2021, Aggregate implications of barriers to female entrepreneurship, Technical report, National Bureau of Economic Research.

Ciccone, A, and E Papaioannou, 2008, Human capital, the structure of production, and economic growth, *Review of Economics and Statistics* .

Core, Fabrizio, 2020, Maternity risk and the gender gap in entrepreneurship, *Unpublished manuscript* .

De Chaisemartin, Clément, and Xavier d'Haultfoeuille, 2020, Two-way fixed effects estimators with heterogeneous treatment effects, *American Economic Review* 110, 2964–96.

De Mel, Suresh, David McKenzie, and Christopher Woodruff, 2009, Are women more credit constrained? experimental evidence on gender and microenterprise returns, *American Economic Journal: Applied Economics* 1, 1–32.

De Mel, Suresh, David McKenzie, and Christopher Woodruff, 2010, Who are the microenterprise owners? evidence from sri lanka on tokman versus de soto, in *International differences in entrepreneurship*, 63–87 (University of Chicago Press).

Deininger, Klaus, Aparajita Goyal, and Hari Nagarajan, 2013, Women's inheritance rights and intergenerational transmission of resources in India, *Journal of Human Resources* 48, 114–141.

Deininger, Klaus, Songqing Jin, Hari K Nagarajan, and Fang Xia, 2019, Inheritance law reform, empowerment, and human capital accumulation: Second-generation effects from india, *Journal of Development Studies* 55, 2549–2571.

Ebenstein, Avraham, 2014, Patrilocality and missing women, *Working Paper* .

Evans, David S, and Linda S Leighton, 1990, Some empirical aspects of entrepreneurship, in *Economics of Small Firms*, 79–99 (Springer).

Fernandez, Raquel, 2007, Women, work, and culture, *Journal of the European Economic Association* 5, 305–332.

Field, Erica, Seema Jayachandran, and Rohini Pande, 2010, Do traditional institutions constrain female entrepreneurship? A field experiment on business training in India, *American Economic Review* 100, 125–29.

Field, Erica, Rohini Pande, Natalia Rigol, Simone Schaner, and Charity Troyer Moore, 2021, On her own account: How strengthening women's financial control impacts labor supply and gender norms, *American Economic Review* 111, 2342–75.

Fischer, Eileen M, A Rebecca Reuber, and Lorraine S Dyke, 1993, A theoretical overview and extension of research on sex, gender, and entrepreneurship, *Journal of Business Venturing* 8, 151–168.

Fletcher, Erin, Rohini Pande, and Charity Maria Troyer Moore, 2017, Women and Work in India: Descriptive Evidence and a Review of Potential Policies .

Foster, Andrew D, and Mark R Rosenzweig, 1995, Learning by doing and learning from others: Human capital and technical change in agriculture, *Journal of Political Economy* 103, 1176–1209.

Foster, Andrew D, and Mark R Rosenzweig, 1996, Technical change and human-capital returns and investments: evidence from the green revolution, *American Economic Review* 931–953.

Galor, Oded, and Joseph Zeira, 1993, Income distribution and macroeconomics, *Review of Economic Studies* 60, 35–52.

Ghani, Ejaz, William R Kerr, and Stephen O'connell, 2014a, Spatial determinants of entrepreneurship in India, *Regional Studies* 48, 1071–1089.

Ghani, Ejaz, William R Kerr, and Stephen D O'connell, 2013, Local industrial structures and female entrepreneurship in India, *Journal of Economic Geography* 13, 929–964.

Ghani, Ejaz, William R Kerr, and Stephen D O'Connell, 2014b, Political reservations and women's entrepreneurship in India, *Journal of Development Economics* 108, 138–153.

Gneezy, Uri, Kenneth L Leonard, and John A List, 2009, Gender differences in competition: Evidence from a matrilineal and a patriarchal society, *Econometrica* 77, 1637–1664.

Goldin, Claudia, 2014, A grand gender convergence: Its last chapter, *American Economic Review* 104, 1091–1119.

Gompers, Paul A, and Sophie Q Wang, 2017, Diversity in innovation, Technical report, National Bureau of Economic Research.

Goodman-Bacon, Andrew, 2021, Difference-in-differences with variation in treatment timing, *Journal of Econometrics* .

Gottlieb, Joshua D, Richard R Townsend, and Ting Xu, 2021, Does Career Risk Deter Potential Entrepreneurs?, *The Review of Financial Studies* hhab105.

Halder, Debarati, and K Jaishankar, 2008, Property rights of Hindu women: A feminist review of succession laws of ancient, medieval, and modern India, *Journal of Law and Religion* 24, 663–687.

Hall, Robert E, and Susan E Woodward, 2010, The burden of the nondiversifiable risk of entrepreneurship, *American Economic Review* 100, 1163–94.

Harari, Mariaflavia, 2019, Women's inheritance rights and bargaining power: Evidence from Kenya, *Economic Development & Cultutral Change* 1–47.

Hazan, Moshe, David Weiss, and Hosny Zoabi, 2019, Women's liberation as a financial innovation, *Journal of Finance* 74, 2915–2956.

Heath, Rachel, and Xu Tan, 2019, Intrahousehold bargaining, female autonomy, and labor supply: Theory and Evidence from India, *Journal of the European Economic Association* Forthcoming.

Holtz-Eakin, Douglas, David Joulfaian, and Harvey S. Rosen, 1994a, Entrepreneurial Decisions and Liquidity Constraints, *RAND Journal of Economics* 25, 334–347.

Holtz-Eakin, Douglas, David Joulfaian, and Harvey S Rosen, 1994b, Sticking it out: Entrepreneurial survival and liquidity constraints, *Journal of Political Economy* 102, 53–75.

Howell, Sabrina, and Ramana Nanda, 2019, Networking Frictions in Venture Capital, and the Gender Gap in Entrepreneurship, *Harvard Business School Working Paper* .

Hsieh, Chang-Tai, Erik Hurst, Charles I Jones, and Peter J Klenow, 2019, The Allocation of Talent and U.S. Economic Growth, *Econometrica* 87, 1439–1474.

Hurst, Erik, and Annamaria Lusardi, 2004, Liquidity constraints, household wealth, and entrepreneurship, *Journal of Political Economy* 112, 319–347.

Jayachandran, Seema, 2021a, Microentrepreneurship in developing countries, *Handbook of Labor, Human Resources and Population Economics* 1–31.

Jayachandran, Seema, 2021b, Social norms as a barrier to women's employment in developing countries, *IMF Economic Review* 69, 576–595.

Jayachandran, Seema, and Rohini Pande, 2017, Why are Indian children so short? The role of birth order and son preference, *American Economic Review* 107, 2600–2629.

Jayaratne, Jith, and Philip E Strahan, 1996, The finance-growth nexus: Evidence from bank branch deregulation, *Quarterly Journal of Economics* 111, 639–670.

Kerr, William, and Ramana Nanda, 2011, Financing constraints and entrepreneurship, in David B Audretsch, Oliver Falck, and Stephan Heblich, eds., *Handbook of Research on Innovation and Entrepreneurship*, chapter 1, 88–103 (Edward Elgar Publishing).

Kishwar, Madhu, 1994, Codified Hindu law: Myth and reality, *Economic and Political Weekly* 2145–2161.

Klapper, Leora F, and Simon C Parker, 2010, Gender and the business environment for new firm creation, *World Bank Research Observer* 26, 237–257.

Koudijs, Peter, and Laura Salisbury, 2020, Limited liability and investment: Evidence from changes in marital property laws in the us south, 1840–1850, *Journal of Financial Economics* 138, 1–26.

Koudijs, Peter, Laura Salisbury, and Gurpal Sran, 2021, For richer, for poorer: Bankers' liability and bank risk in new england, 1867 to 1880, *Journal of Finance* 76, 1541–1599.

La Ferrara, Eliana, and Annamaria Milazzo, 2017, Customary norms, inheritance, and human capital: evidence from a reform of the matrilineal system in ghana, *American Economic Journal: Applied Economics* 9, 166–85.

Lowes, Sara, Nathan Nunn, James A Robinson, and Jonathan L Weigel, 2017, The evolution of culture and institutions: Evidence from the Kuba Kingdom, *Econometrica* 85, 1065–1091.

Luo, Patrick, 2017, The Other Gender Gap .

Moskowitz, Tobias J, and Annette Vissing-Jørgensen, 2002, The returns to entrepreneurial investment: A private equity premium puzzle?, *American Economic Review* 92, 745–778.

Rajan, Raghuram G., and Luigi Zingales, 1998, Financial Dependence and Growth, *American Economic Review* 88, 559–586.

Roy, Sanchari, 2008, Female Empowerment through Inheritance Rights: Evidence from India, *Working Paper* .

Roy, Sanchari, 2015, Empowering women? Inheritance rights, female education and dowry payments in India, *Journal of Development Economics* 114, 233–251.

Schmalz, Martin C, David A Sraer, and David Thesmar, 2017, Housing collateral and entrepreneurship, *Journal of Finance* 72, 99–132.

Schoellman, Todd, and Michele Tertilt, 2006, Marriage laws and growth in sub-saharan africa, *American Economic Review* 96, 295–298.

Sen, Amartya, 1992, Missing women, *BMJ: British Medical Journal* 304, 587.

Sun, Liyang, and Sarah Abraham, 2020, Estimating dynamic treatment effects in event studies with heterogeneous treatment effects, *Journal of Econometrics* .

Tabellini, Guido, 2008, Institutions and culture, *Journal of the European Economic association* 6, 255–294.

Tertilt, Michele, 2006, Polygyny, women's rights, and development, *Journal of the European Economic Association* 4, 523–530.

UN-HABITAT, 2006, *Women's Equal Rights to Housing, Land and Property in International Law* (UN-HABITAT).

USAID, 2003, Women's Equal Rights to Housing, Land and Property in International Law, Technical report, Final Synthesis and Conference Proceedings Paper.

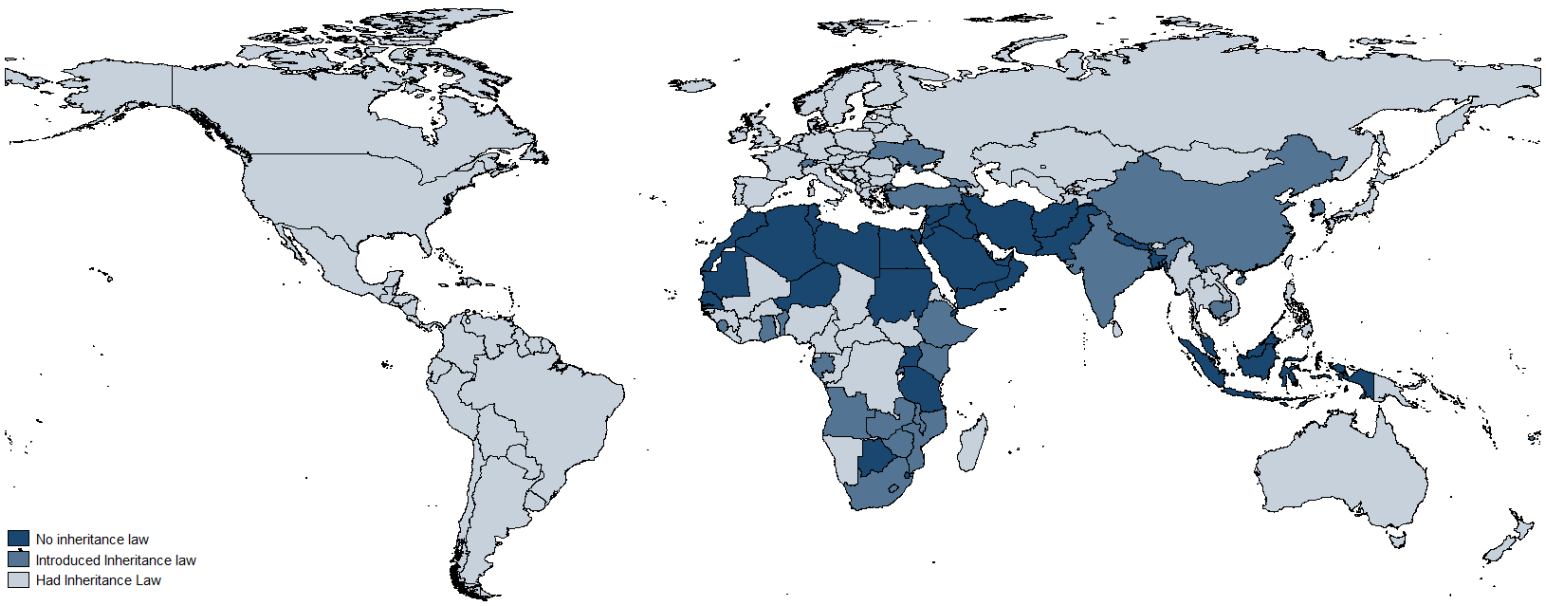
Watch, Human Rights, 2003, Double Standards: Women's Property Rights Violations in Kenya, *Human Rights Watch* 15, 1–54.

World Bank, World, 2012, World Development Report 2012 : Gender Equality and Development .

World Bank, World, 2019, Women, Business, and the Law 2019 .

Zandberg, Jonathan, 2021, Family comes first: Reproductive health and the gender gap in entrepreneurship, *Journal of Financial Economics* 140, 838–864.

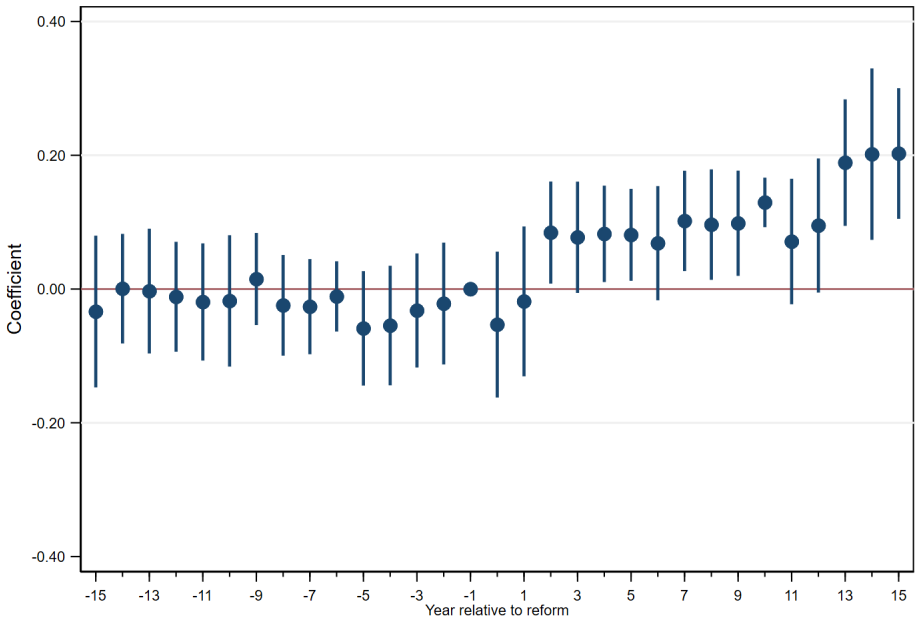
FIGURE 1: WOMEN'S INHERITANCE RIGHTS REFORMS AROUND THE WORLD, 1960-2017



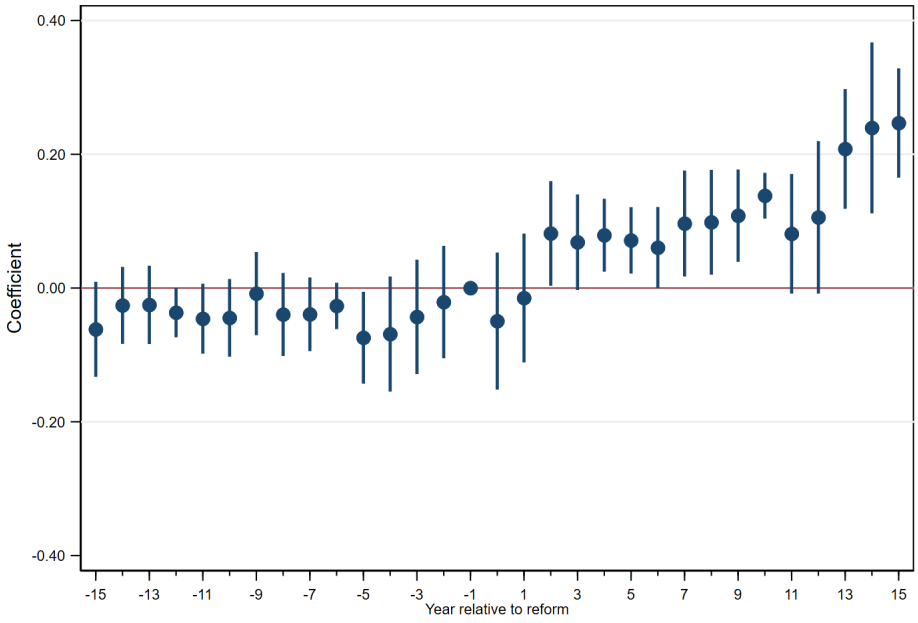
Notes: This figure presents a map of the countries that adopted equal inheritance rights between 1960 and 2017. Equal inheritance rights refer to equal legal property rights to both sons and daughters. The low intensity shaded countries have equal inheritance rights since before 1960 while the highest intensity shaded countries do not have equal inheritance rights as of 2017. The intermediate intensity shaded regions introduced reforms between 1960 and 2017. Source: Author's calculation using various reports from the World Bank.

FIGURE 2: FEMALE BUSINESS FORMATION RATES AROUND THE REFORM

(a) Treated women relative to all

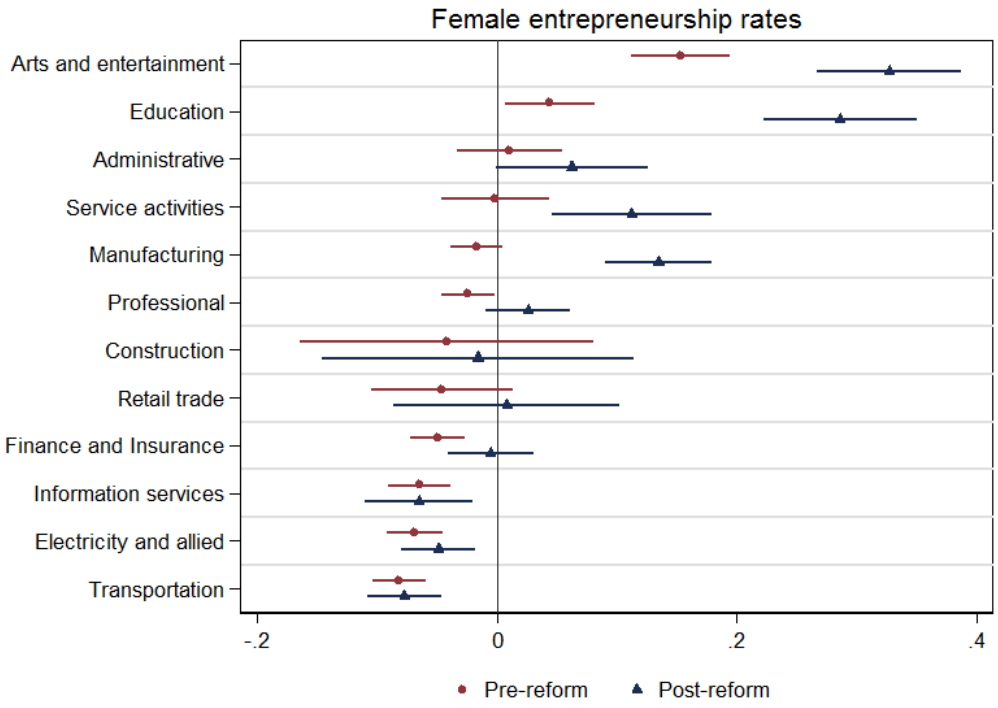


(b) Treated women relative to treated men



Notes: The two figures plot evolution of business formation rates by women around the inheritance reform. Panels (a) and (b) plot the regression coefficients and 95% confidence intervals from estimating a regression – where the dependent variable is an indicator variable for whether a business was started by a women from treated religious community – on a dummy variable for each year relative to the year of the reform. Panel (a) plots business formation rates for treated women relative to all entrepreneurs while panel (b) plots business formation rates for treated women relative to treated men. All regressions include year-of-creation fixed effects. All coefficients are plotted relative to the business formation rate in k=-1, which is normalized to zero. Data Source: All India Micro Small & Medium Enterprise Census.

FIGURE 3: BUSINESS FORMATION BY INDUSTRY



Notes: This figure plots female entrepreneurship rates by industry around the reform. The figure shows the coefficients and 95% confidence intervals from estimating a regression of the dependent variable – an indicator variable for whether a business was started by a women – on a set of dummy variables for each industry. The circles and triangles display the effects from estimating separate regressions for pre-reform and post-reform periods, respectively. All coefficients are plotted relative to the industry category Agriculture. The sample is restricted to business owners from treated religious communities. Data Source: All India Micro Small & Medium Enterprise Census.

TABLE 1: EFFECT OF INHERITANCE REFORM ON WOMEN'S INHERITANCE OF LAND

This table presents results from regressions to test the effect of inheritance reform. Columns 1 to 4 models the likelihood of inheriting land among siblings, using linear probability model while columns 5 to 8 models the magnitude of the inheritance (measured in acres). The sample consists of siblings with parents owning positive landholdings in the early reform states. *Female* is an indicator variable for female. *Death post reform* is an indicator variable for whether the father of the individual died after the reform. *Death*, $t \in \{-5, -1\}$ is an indicator variable for whether the death of the father occurred in the six years leading up to the reform. *Death*, $t \in \{0, 5\}$ is an indicator variable for whether the father died in the first five years after the reform and *Death*, $t \geq 6$ is an indicator variable for whether the father died in the sixth year after the reform and beyond. Additional controls include whether the individual married at the time of the reform, mother's education in years, father's education in years, father's landholding in acres, and whether an individual belongs to scheduled castes or scheduled tribes. All pair wise interactions are included but not shown for brevity. All regressions include sibling-composition fixed effects and gender-specific year-of-birth fixed effects. Standard errors are corrected for heteroscedasticity and auto correlation, and clustered by household. Standard errors are reported in parentheses. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively. Data Source: Rural Economic and Demographic Survey.

	$\mathbb{1}_{\text{inheritance}}$				Land inherited (acres)			
	Baseline	Pre-trends	Addl. controls	Placebo	Baseline	Pre-trends	Addl. controls	Placebo
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Female	-0.663***	-0.699***	-0.665***	-0.546***	-0.950***	-0.966***	-0.976***	-0.312***
	(0.019)	(0.063)	(0.019)	(0.120)	(0.036)	(0.105)	(0.036)	(0.109)
Female x Death post reform	0.117***		0.166***	-0.194	0.258***		0.397***	0.048
	(0.034)		(0.057)	(0.134)	(0.053)		(0.073)	(0.120)
Female x Death, t $\in \{-6, -1\}$		0.036				0.015		
		(0.061)				(0.100)		
Female x Death, t $\in \{0, 5\}$		0.127**				0.143		
		(0.051)				(0.087)		
Female x Death, t ≥ 6		0.172**				0.513***		
		(0.080)				(0.117)		
Fixed effects:								
Sibling-composition	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth-year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted-R^2	0.475	0.482	0.476	0.665	0.469	0.471	0.469	0.787
Observations	5252	5252	5252	307	5252	5252	5252	307

TABLE 2: FEMALE ENTREPRENEURSHIP AROUND THE REFORM

This table presents results from regressions to test whether women from treated religious communities start a business after the inheritance reform in their state. I classify business owners from treated religious communities as *Treated* while business owners from non-treated religious communities serve as my control group. *Treated* refers to individuals from the four religious groups, i.e., Hindus, Sikhs, Buddhists, and Jains while the *non-treated* consists of individuals from the other religious groups, i.e., Muslims, Christians, Jews, and others. Columns 1 and 2 present results for all states while columns 3 and 4 present results for the early reforming states. The dependent variable is an indicator variable for whether a woman starts a business in a two-digit industry i, state s, in year t. *Post reform* is an indicator variable equal to 1 from the reform year and onwards. Standard errors are corrected for heteroscedasticity and autocorrelation and clustered by state and year. Standard errors are reported in parentheses. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively. Data Source: All India Micro Small & Medium Enterprise Census.

	All states		Early states	
	(1)	(2)	(3)	(4)
Treated	0.017***	0.012***	0.016***	0.015***
	(0.004)	(0.004)	(0.004)	(0.004)
Post reform × Treated	0.012**	0.017***	0.015**	0.013**
	(0.005)	(0.005)	(0.006)	(0.007)
Fixed effects:				
Industry x Year	Yes	Yes	Yes	Yes
State x Year	Yes	Yes	Yes	Yes
State x Industry	No	Yes	No	Yes
Adjusted-R^2	0.13	0.16	0.14	0.15
Observations	1,120,491	1,120,491	489,332	489,332

TABLE 3: HETEROGENEOUS TREATMENT EFFECTS BY FINANCING NEEDS

This table presents results from regressions examining heterogeneity in the business formation based on financing needs around the inheritance reform in their state. Panel A reports heterogeneity based on required startup capital while panel B uses the index of financial dependence from (Rajan and Zingales, 1998). Columns 1 and 2 in both panels present results for all states while columns 3 and 4 in both panels present results for the early reforming states. The dependent variable is an indicator variable for whether a women starts a business in a two-digit industry i, state s, in year t. *Post reform* is an indicator variable equal to 1 from the reform year and onwards. Industries are classified as *High* if their purchase value of plant and machinery in the pre-treatment period is in the top tercile and quartile of the distribution, and interacted with the *Post reform* dummy. In both panels, columns 1 and 3 present results based on the tercile measure while columns 2 and 4 present results based on the quartile measure. The sample is restricted to business owners from treated religious communities. Additionally, panel B restricts the sample to manufacturing industries given the financial dependence measure is only available for manufacturing. The coefficients are estimated using ordinary least squares (OLS). Standard errors are corrected for heteroscedasticity and autocorrelation and clustered by state and year. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively. Data Source: All India Micro Small & Medium Enterprise Census.

	Panel A: Startup capital			
	All states		Early states	
	(1)	(2)	(3)	(4)
Post reform × High	0.032*	0.044**	0.020**	0.041***
	(0.017)	(0.017)	(0.009)	(0.014)
Fixed effects:				
Industry x Year	Yes	Yes	Yes	Yes
State x Year	Yes	Yes	Yes	Yes
State x Industry	Yes	Yes	Yes	Yes
Adjusted-R^2	0.17	0.17	0.13	0.13
Observations	991,653	991,653	374,522	374,522

	Panel B: Finance dependence			
	All states		Early states	
	(1)	(2)	(3)	(4)
Post reform × High	0.013**	0.014**	0.016*	0.015*
	(0.007)	(0.006)	(0.009)	(0.009)
Fixed effects:				
Industry x Year	Yes	Yes	Yes	Yes
State x Year	Yes	Yes	Yes	Yes
State x Industry	Yes	Yes	Yes	Yes
Adjusted-R^2	0.12	0.12	0.10	0.10
Observations	629,267	629,267	246,590	246,590

TABLE 4: FEMALE ENTREPRENEURSHIP AND ACCESS TO FINANCE

This table presents results from instrumental variable regressions examining whether access to finance complements the inheritance reform and subsequently drives increase in female entrepreneurship. Columns 1 and 2 adopt clustering at the state-level to account for correlations across observations within the states. Columns 3 and 4 adopt cluster-robust standard errors that permit heteroscedasticity while columns 5 and 6 use cluster bootstrap-t procedures to estimate standard errors. The dependent variable is the ratio of state-level female businesses to total male businesses each year. Explanatory variables reported are bank branches in 1961 per 100,000 persons interacted with (row-wise) (a) Post reform (b) a time trend, (c) a post-1976 time trend, and (d) a post-1989 time trend. Other controls include state population density, log state income per capita, and log rural locations per capita, all measured in 1961. They enter the regression in the same way as branches per capita in 1961. *Post reform* is an indicator variable equal to 1 from the reform year and onwards. Standard errors are reported in parentheses. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively.

Standard errors	Cluster		Robust		Bootstrap	
	(1)	(2)	(3)	(4)	(5)	(6)
Cumulative bank branches opened	-0.009	-0.004	-0.009	-0.004	-0.009	-0.004
in rural, unbanked locations	(0.011)	(0.005)	(0.008)	(0.008)	(0.010)	(0.010)
Post reform x Cumulative bank branches	0.042**	0.013*	0.042***	0.013**	0.042**	0.013
in rural areas	(0.018)	(0.008)	(0.014)	(0.007)	(0.018)	(0.010)
Number of bank branches per capita	0.000	-0.001	0.000	-0.001	0.000	-0.001
in 1961 $\times$ (1961-2000) trend	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)
Post-1976 $\times$ (1977-2000) trend	0.018	0.021**	0.018	0.021	0.018	0.021
	(0.030)	(0.010)	(0.019)	(0.017)	(0.021)	(0.023)
Post-1989 $\times$ (1977-2000) trend	-0.011	0.037***	-0.011	0.037***	-0.011	0.037***
	(0.015)	(0.007)	(0.016)	(0.010)	(0.017)	(0.011)
Fixed effects:						
State	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	Yes	No	Yes	No	Yes
Adjusted-R^2	0.31	0.44	0.31	0.44	0.31	0.44
Observations	556	556	556	556	556	556

TABLE 5: HETEROGENEOUS TREATMENT EFFECTS BY DISCRIMINATORY SOCIAL NORMS

This table presents results from regressions examining heterogeneity in business formation based on regional differences in discriminatory social norms. Columns 1 and 2 present results for all states, while columns 3 and 4 present results for the early reforming states. The dependent variable is an indicator variable for whether a woman starts a business in a two-digit industry i, state s, in year t. *Post reform* is an indicator variable equal to 1 from the reform year and onwards. Districts are classified as *Low discrimination* if the number of estimated missing women (Anderson and Ray, 2010), computed as the difference between the actual number of women per 1000 men minus the counterfactual number of women per 1000 men, is in the top tercile and quartile of the distribution. Columns 1 and 3 present results for the tercile measure, while columns 2 and 4 present results for the quartile measure. The sample is restricted to business owners from treated religious communities. The coefficients are estimated using ordinary least squares (OLS). Standard errors are corrected for heteroscedasticity and autocorrelation and clustered by state and year. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively. Data Source: All India Micro Small & Medium Enterprise Census.

	All states		Early states	
	(1)	(2)	(3)	(4)
Low discrimination	0.005**	0.005***	0.000	-0.003
	(0.002)	(0.002)	(0.004)	(0.005)
Post reform × Low discrimination	0.028***	0.016**	0.039***	0.028***
	(0.009)	(0.006)	(0.009)	(0.008)
Fixed effects:				
Industry × Year	Yes	Yes	Yes	Yes
State × Year	Yes	Yes	Yes	Yes
State × Industry	Yes	Yes	Yes	Yes
Adjusted-R^2	0.17	0.17	0.16	0.16
Observations	968,823	968,823	429,904	429,904

TABLE 6: CLOSURE RATES AMONG MARGINAL ENTREPRENEURS

This table presents results from regressions which compare operational closure rates (a measure of ex-post performance) between new female and male businesses created around the inheritance reform. Columns 1 and 2 present results for all states while columns 3 and 4 present results for the early reforming states. The dependent variable is an indicator variable which takes the value of 1 if the business was closed for any operational reasons. *Female* is an indicator variable for whether the individual is female. *Post reform* is an indicator variable equal to 1 from the reform year and onwards. The sample is restricted to business owners from treated religious communities. Standard errors are corrected for heteroscedasticity and auto correlation, and clustered by household. Standard errors are reported in parentheses. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively. Data Source: All India Micro Small & Medium Enterprise Census.

	All states		Early states	
	(1)	(2)	(3)	(4)
Female	0.009***	0.007***	0.003	0.003
	(0.003)	(0.003)	(0.003)	(0.003)
Post reform x Female	-0.015***	-0.010***	-0.008**	-0.008**
	(0.004)	(0.003)	(0.003)	(0.004)
Fixed effects:				
Industry x Year	Yes	Yes	Yes	Yes
State x Year	Yes	Yes	Yes	Yes
State x Industry	No	Yes	No	Yes
p-val: $\beta_{\text{Female}} + \beta_{\text{Post}\times\text{Female}} = 0$	0.00	0.09	0.03	0.04
Adjusted-R^2	0.56	0.57	0.04	0.05
Observations	991,653	991,653	374,522	374,522

TABLE 7: AGGREGATE ENTREPRENEURIAL ACITIVITY

This table presents results from regressions examining overall business formation around the inheritance reform. In both columns, the dependent variable is the total businesses per 100,000 started by treated (non-treated) religious groups in industry i, state s, and year t. Column 1 presents the results for all states while column 2 presents the results for the early reforming states. *Treated* refers to individuals from the four religious groups, i.e., Hindus, Sikhs, Buddhists, and Jains while the *non-treated* consists of individuals from other religious groups, i.e., Muslims, Christians, Jews, and others. *Post reform* is an indicator variable if the year of the startup is greater than (or equal to) the state-specific reform year. All regressions include state-year, industry-year, and state-industry fixed effects and are estimated using ordinary least squares (OLS). Standard errors are clustered at the state-year level, and are robust to heteroscedasticity. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively.Data Source: All India Micro Small & Medium Enterprise Census.

Dependent variable	Total businesses per 100,000	
	All states	Early states
	(1)	(2)
Treated	0.072***	0.035***
	(0.006)	(0.004)
Post × Treated	0.030***	0.075***
	(0.011)	(0.012)
Fixed effects:		
Industry × Year	Yes	Yes
State × Year	Yes	Yes
State × Industry	Yes	Yes
Adjusted-R^2	0.35	0.31
Observations	37,316	16,690

TABLE 8: FEMALE ENTREPRENEURSHIP BY INDUSTRY TYPE

This table presents results from regressions examining female entrepreneurship by industry. Columns 1 and 2 present results for all states while columns 3 and 4 present results for the early reforming states. The dependent variable is an indicator variable for whether a female starts a business in a two-digit industry i, state s, in year t. *Post reform* is an indicator variable equal to 1 from the reform year and onwards. *Female-dominated industry* is a dummy variable that takes a value of 1 if the share of female entrepreneurs within an industry in the pre-treatment period is in the top tercile or quartile of the distribution, and zero otherwise. Columns 1 and 3 present results based on the tercile measure while columns 2 and 4 present results based on the quartile measure. The sample is restricted to business owners from treated religious communities. The coefficients are estimated using ordinary least squares (OLS). Standard errors are corrected for heteroscedasticity and autocorrelation and clustered by state and year. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively. Data Source: All India Micro Small & Medium Enterprise Census.

	All states		Early states	
	(1)	(2)	(3)	(4)
Post reform × Female-dominated industry	0.064***	0.080***	0.014*	0.024**
	(0.011)	(0.013)	(0.007)	(0.009)
Fixed effects:				
Industry x Year	Yes	Yes	Yes	Yes
State x Year	Yes	Yes	Yes	Yes
State x Industry	Yes	Yes	Yes	Yes
Adjusted-R^2	0.17	0.17	0.13	0.13
Observations	991,653	991,653	374,522	374,522

TABLE 9: ALTERNATIVE SPECIFICATIONS

This table presents alternative specifications of the main analyses. Panel A of the table reports robustness checks on actual land inheritance among females. All columns (except column 5) models the inheritance of land among siblings, using a linear probability model.*Death post- reform* is an indicator variable for whether the father of the individual died after the reform, *Female* is an indicator variable for whether the individual is Female and *Reform states* is an indicator variable. The sample consists of siblings in the five reform states. All regressions include gender-specific year-of-birth fixed effects and sibling-composition fixed effects. Standard errors are corrected for heteroscedasticity and auto correlation, and clustered by household. Panels B, C and D includes state-industry-year fixed effects and The coefficients are estimated using ordinary least squares (OLS). Panel B presents the results from regression examining whether women start a business after the inheritance reform. Panel C reports results of a heterogeneous treatment intensity. I classify business owners from treated religious communities as *Treated* while business owners from non-treated religious communities serve as my control group. The dependent variable is the defined as the ratio of total new businesses created by women from treated religious communities to the total new businesses created by all women in a two-digit industry i, state s, in year t. The sample is restricted to only women. Panel D restricts the baseline estimation to entrepreneurs from treated religious communities. The dependent variable is the defined as the ratio of business share of women from treated religious communities to the business share by men from treated religious communities in a two-digit industry i, state s, in year t. *Treated* refers to individuals from the four religious groups, i.e., Hindus, Sikhs, Buddhists, and Jains while the *non-treated* consists of individuals from the other religious groups, i.e., Muslims, Christians, Jews, and others. *Post reform* is an indicator variable equal to 1 from the reform year and onwards. Standard errors are reported in parentheses. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively.

	Panel A: Alternative specifications										
	Baseline	Exclude	Village	Non-reform	Dep. var.:	Treated	Placebo	Treated women in non-reform states			
	Ln(inheritance)	Kerala	clustering	states	Empirical share	women	women	1976	1986	1989	1994
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Female	-0.950***	-1.004***	-0.950***	-0.905***	-0.230***	-	-	-	-	-	-
	(0.036)	(0.037)	(0.065)	(0.019)	(0.010)						
Female x Death post reform	0.258***	0.150**	0.258***	0.205***	0.037***	-	-	-	-	-	-
	(0.053)	(0.062)	(0.081)	(0.046)	(0.014)						
Death post reform	-0.251***	-0.144**	-0.251***	-0.253***	-0.019*	-	-	0.014	0.019	0.006	-0.021
	(0.051)	(0.057)	(0.076)	(0.042)	(0.011)			(0.033)	(0.025)	(0.026)	(0.029)
Death post reform x Reform states	-	-	-	-	-	0.043***	0.002	-	-	-	-
						(0.016)	(0.057)				
Fixed effects:											
Sibling-composition	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Birth-year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted-R^2	0.351	0.394	0.351	0.287	0.249	0.027	0.071	0.031	0.031	0.031	0.031
Observations	5,252	4,517	5,252	16,913	5,252	2,064	755	4,417	4,417	4,417	4,417

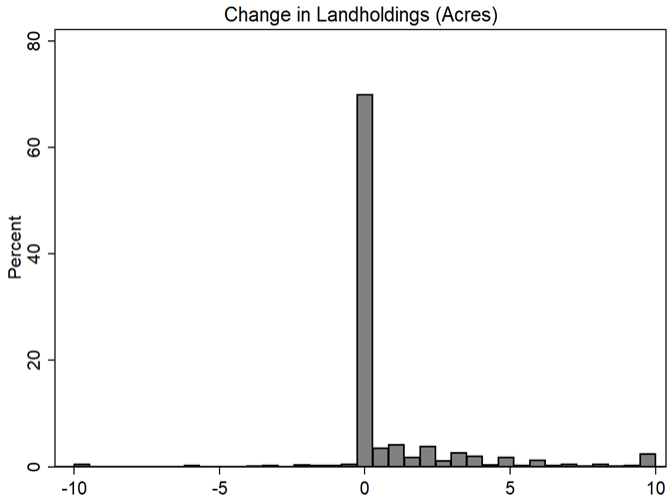
	Panel B: Baseline	
	All states	Early states
	(1)	(2)
Treated	0.012***	0.017***
	(0.004)	(0.004)
Post reform × Treated	0.017***	0.012*
	(0.006)	(0.007)
Fixed effects:		
State x Industry x Year	Yes	Yes
Adjusted-R^2	0.17	0.16
Observations	1,117,207	488,175

For Online Publication

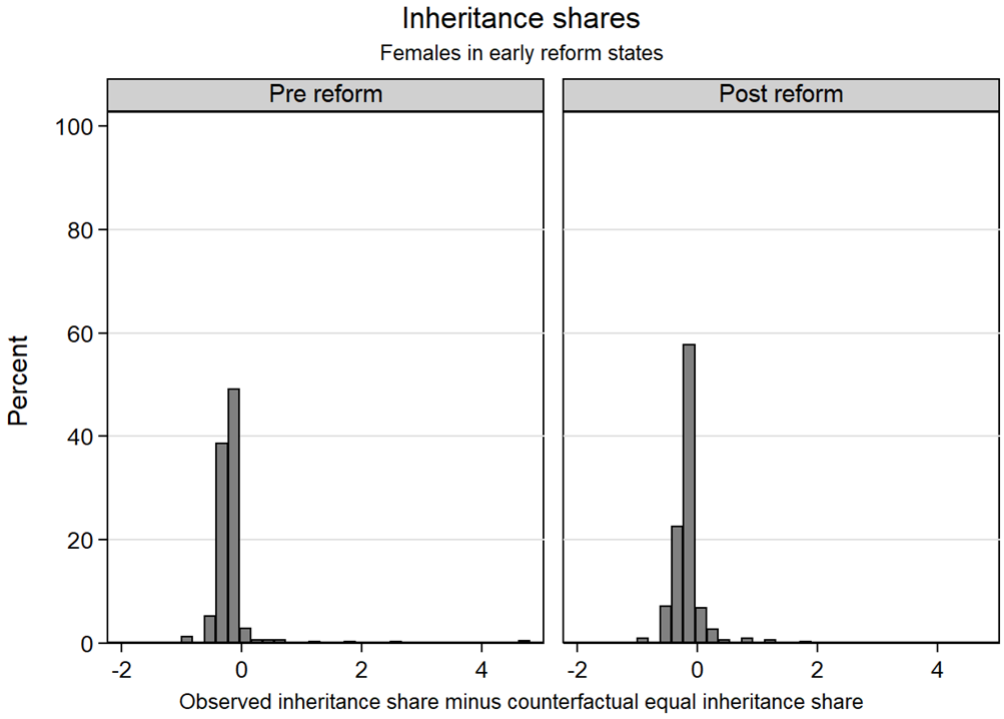
Women's Inheritance Rights and Entrepreneurship Gender Gap

FIGURE IA 1: CHANGES IN LANDHOLDINGS AND INHERITANCE BY WOMEN

(a) Change in landholdings



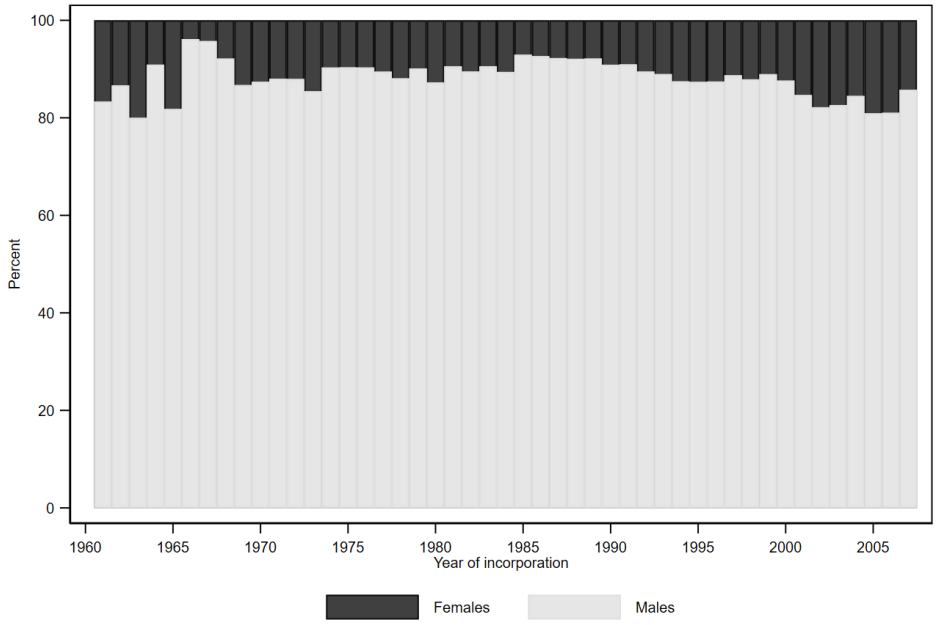
(b) Land inherited by women from treated religious communities



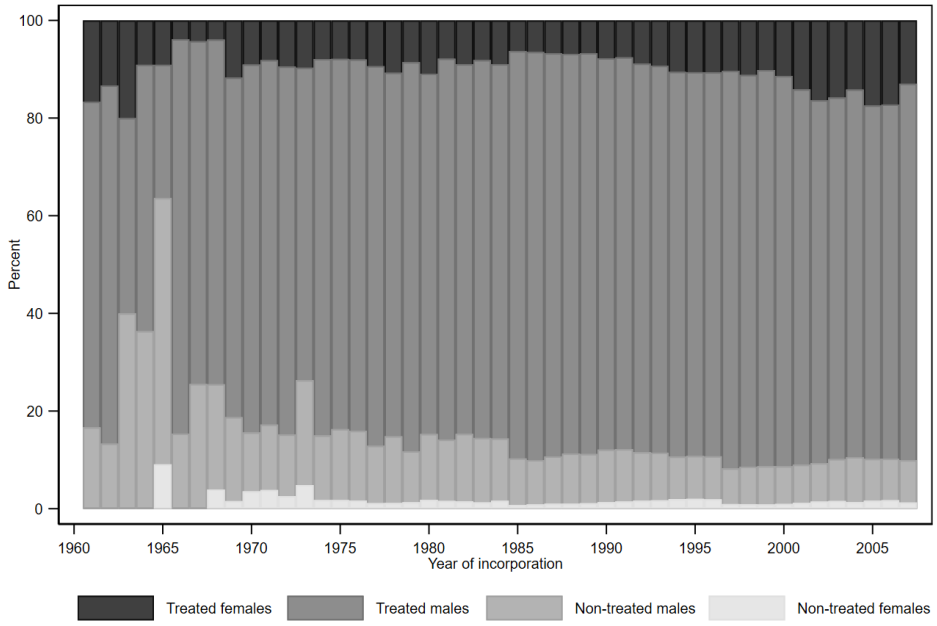
Notes: These figures plot changes in landholdings and inherited landholdings by women around the reform. Panel (a) plots the change in landholdings (measured in acres) while panel (b) plot the change in inheritance share among women from treated religious communities around the reform. Inheritance share is computed as observed inheritance share minus the counterfactual equal inheritance share under the reform. Data Source: Rural Economic and Demographic Surveys

FIGURE IA 2: DISTRIBUTION OF START-UP YEARS BY GENDER AND RELIGION

(a) By gender

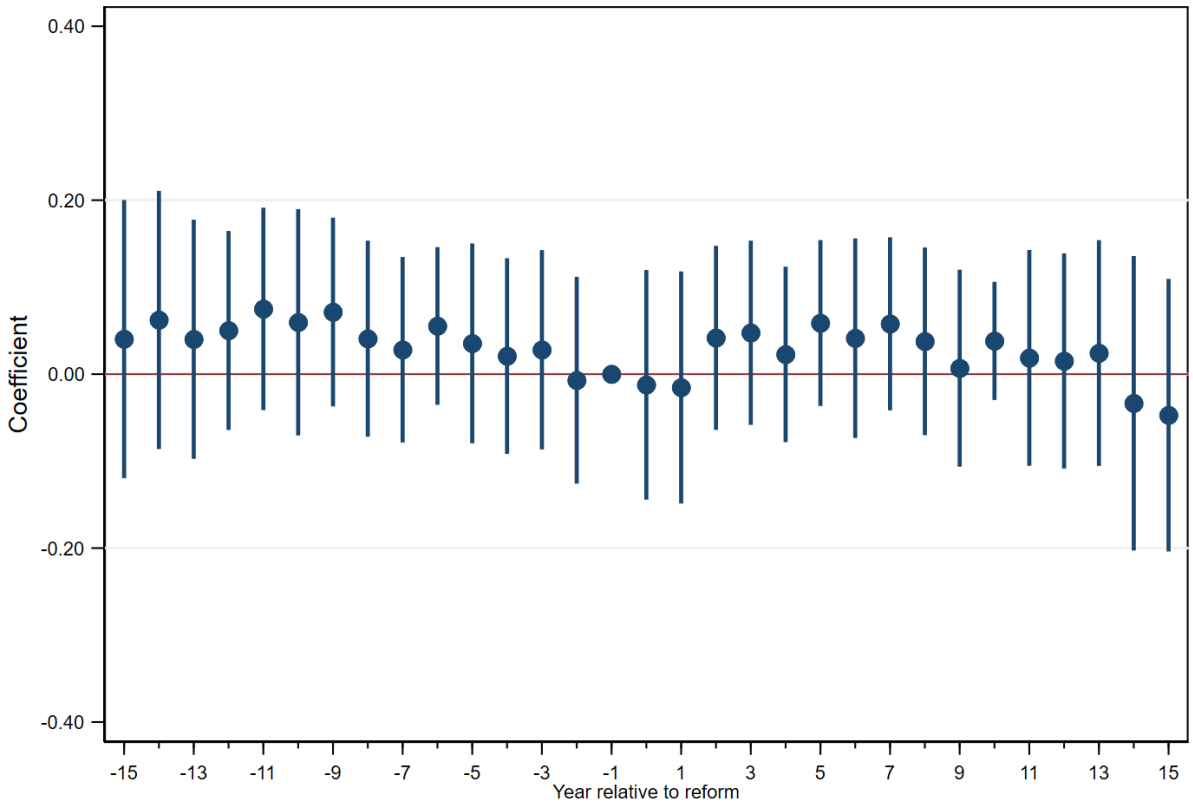


(b) By gender and religion



Notes: These figures plot trends in business formation. Panel (a) plots the trends in business formation by gender over year while panel (b) plots trends in business formation by gender and religion of the entrepreneur over year. Data Source: All India Micro, Small, & Medium Enterprise Census.

FIGURE IA 3: MALE BUSINESS FORMATION RATES AROUND THE REFORM



Notes: The figure plots the evolution of business formation rates in event-time for male entrepreneurs from treated religious communities relative to male entrepreneurs from the non-treated religious communities. Specifically, I plot the regression coefficients and 95% confidence intervals from estimating a regression – where the dependent variable is an indicator variable for whether a business was started by a male from treated religious communities – on a dummy variable for each year relative to the year of the reform. All regressions include year-of-creation fixed effects and all coefficients are plotted relative to the business formation rate in k=-1, which is normalized to zero. Data Source: All India Micro Small & Medium Enterprise Census.

TABLE IA1: SURVIVAL ANALYSIS OF ADOPTION OF INHERITANCE REFORM

A Cox proportional hazards model is fitted to the time taken to adopt the inheritance reform in a state prior to 2005. Explanatory variables include the following: *Growth rate in women entrepreneurship* is the annual growth rate in number of women businesses within a state using data obtained from the MSME Census. *Fraction legislators from* Congress, Janata, Hindu, Hard Left, and Regional refer to the number of seats held in state legislatures by parties in these political groupings. *Cumulative land reform* is the total number of land reform acts passed by an Indian state. *Health and education spending* is the fraction of total state spending on health and education. *GSP growth rate* is the real annual growth rate in gross state product (GSP). *Aggregate headcount ratio* is defined as the percentage of rural and urban households with per capita monthly expenditures below the poverty line. *Log (real agricultural wage)* is log real male daily agricultural wage, and *Log (factory wage)* is log real remuneration per worker in registered manufacturing plants. *Cumulative bank branches opened* is the annual cumulative bank branches opened in each year. *Priority sector lending share* is the share of bank lending going to priority sectors while *Rural credit share* is the percentage of total bank credit accounted for by rural branches. *Real per capita total bank credit* is the total bank credit per capita disbursed within a state.

	(1)	(2)	(3)	(4)
Growth rate in	-0.020	-0.028	-0.052	-0.022
women entrepreneurship	(0.020)	(0.027)	(0.044)	(0.023)
Fraction legislators from:				
Congress parties		-9.424		
		(8.662)		
Hard Left parties		-9.179		
		(9.542)		
Janata parties		-7.812		
		(8.443)		
Hindu parties		-13.762		
		(15.213)		
Regional parties		-3.547		
		(7.929)		
Cumulative land reform acts			0.128	
			(0.273)	
Health and education spending share			15.373	
			(19.211)	
GSP growth rate			-0.188	
			(0.131)	
Aggregate headcount ratio			0.000	
			(0.106)	
Log(real agricultural wage)			-3.016	
			(2.929)	
Log(factory wage)			-8.189	
			(5.148)	
Cumulative bank branches opened				0.000
				(0.000)
Priority sector lending share				0.074
				(0.096)
Rural credit share				-0.018
				(0.136)
Real per capita total bank credit				0.006
				(0.005)
Observations	476	476	405	385

TABLE IA2: SUMMARY STATISTICS

This table reports summary statistics for the sample. Panel A presents sibling and household characteristics for individuals from the four religious communities, i.e., Hindus, Sikhs, Buddhists, and Jains. Panel B reports business characteristics for individuals from the four religious communities, i.e., Hindus, Sikhs, Buddhists, and Jains.

	Panel A: Sibling and household characteristics					
	Head died before reform			Head died after reform		
	Male	Female	Difference	Male	Female	Difference
	(1)	(2)	(1) - (2)	(3)	(4)	(3) - (4)
Inherited (1=Yes)	0.73	0.04	0.69**	0.69	0.13	0.56**
Inherited land share	0.24	0.02	0.23**	0.22	0.03	0.19**
Area inherited (acres)	3.33	0.08	3.25**	2.09	0.12	1.97**
Married (1=Yes)	0.95	0.96	-0.01	0.93	0.93	-0.00
Age at death (years)	63.72	63.11	0.61	70.35	69.74	0.61
Number of siblings	4.31	4.74	-0.43**	4.69	5.13	-0.44**
Number of brothers	2.54	1.87	0.67**	2.57	2.01	0.56**
Number of sisters	1.77	2.87	-1.09**	2.12	3.12	-1.00**
First born (1=Yes)	0.25	0.16	0.10**	0.25	0.12	0.13**

	Panel B: Business characteristics					
	Pre-reform			Post-reform		
	Male	Female	Difference	Male	Female	Difference
	(1)	(2)	(1) - (2)	(3)	(4)	(3) - (4)
$\text{Log}(\text{size}_{2006})$	12.24	11.54	0.71**	12.04	11.06	0.99**
Number of products	1.06	1.06	-0.00	1.05	1.04	0.01
Manufacturing (1=Yes)	0.65	0.58	0.08**	0.69	0.41	0.28**
Operational closure (1=Yes)	0.25	0.14	0.11**	0.08	0.05	0.02**
Decline in Gross Output	0.02	0.03	-0.01**	0.04	0.04	0.00**
Decline in Networth	0.07	0.05	0.01**	0.03	0.03	0.00**

TABLE IA3: RULING OUT TRENDS IN RELIGION AND GENDER AS EXPLANATIONS

This table reports results from regressions ruling out trends in religion and gender as alternative explanations. Panel A compares business formation among women from treated religions (relative to men from treated religions) around the inheritance reform while Panel B compares business formation among women from treated religions (relative to women from untreated religions) around the inheritance reform. The dependent variable is the fraction of businesses started by women from treated religious communities in a two-digit industry i, state s, in year t. In both panels, column 1 presents the results for all states while column 2 presents the results for the early reforming states. *Treated* refers to individuals from the four religious communities, i.e., Hindus, Sikhs, Buddhists, and Jains. *Post reform* is an indicator variable if the year of the startup is greater than (or equal to) the state-specific reform year. *Female* is an indicator variable for females. All regressions include state-year, industry-year, and state-industry fixed effects and are estimated using ordinary least squares (OLS). Standard errors are clustered at the state-year level, and are robust to heteroscedasticity. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively.Data Source: All India Micro Small & Medium Enterprise Census.

	Panel A: Treated Only	
	All states	Early states
	(1)	(2)
Female	-0.785***	-0.769***
	(0.006)	(0.011)
Post reform x Female	0.097***	0.088***
	(0.013)	(0.018)
Fixed effects:		
Industry × Year	Yes	Yes
State × Year	Yes	Yes
State × Industry	Yes	Yes
Adjusted-R^2	0.74	0.70
Observations	42,124	16,716

	Panel B: Women Only	
	All states	Early states
	(1)	(2)
Treated	0.392***	0.352***
	(0.007)	(0.018)
Post reform x Treated	0.110***	0.127***
	(0.020)	(0.031)
Fixed effects:		
Industry x Year	Yes	Yes
State x Year	Yes	Yes
State x Industry	Yes	Yes
Adjusted-R^2	0.39	0.36
Observations	42,124	15,456

TABLE IA4: HETEROGENEITY BY INHERITED LAND

This table reports results from regressions examining business formation among women from treated religions (relative to men from treated religions) around the inheritance reform by the size of land inherited. The dependent variable is an indicator for whether a business is started by women and zero otherwise. Column 1 presents the results for all states while column 2 presents the results for the early reforming states. *Log (inherited acres)* defined as the natural logarithm of the total inherited land by women from the four religious communities, i.e., Hindus, Sikhs, Buddhists, and Jains at the district-level from the Rural Economic and Demographic Survey. *Post reform* is an indicator variable if the year of the startup is greater than (or equal to) the state-specific reform year. All regressions include state-year, industry-year, and state-industry fixed effects and are estimated using ordinary least squares (OLS). Standard errors are clustered at the state-year level, and are robust to heteroscedasticity. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively.Data Source: All India Micro Small & Medium Enterprise Census.

	All states	Early states
	(1)	(2)
Log (inherited acres)	-0.006***	-0.005
	(0.001)	(0.005)
Post reform × Log (inherited acres)	0.011**	0.020**
	(0.005)	(0.008)
Fixed effects:		
Industry × Year	Yes	Yes
State × Year	Yes	Yes
State × Industry	Yes	Yes
Adjusted-R^2	0.15	0.15
Observations	85,800	33,414

TABLE IA5: BANKING AS A FUNCTION OF INITIAL FINANCIAL DEVELOPMENT

This table presents results from first-stage regressions to test whether a state's initial financial development affects rural branch expansion and constitutes a valid instrument for branch openings in rural unbanked locations. *Rural bank credit (saving) share* is the percentage of total bank credit (saving) accounted for by rural branches. *Priority credit share* is share of bank lending going to priority sectors. Cooperative credit share is primary agricultural cooperative credit as a percentage of total cooperative and bank lending. Explanatory variables reported are bank branches in 1961 per 100,000 persons interacted with (row-wise) (a) a time trend, (b) a post-1976 time trend, and (c) a post-1989 time trend. Other controls include state population density, log state income per capita, and log rural locations per capita, all measured in 1961. They enter the regression in the same way as branches per capita in 1961. F-test 1 and F-test 2 are the joint significance test for coefficients in the first two rows and first three rows, respectively. Standard errors are corrected for heteroscedasticity and auto correlation, and clustered by state. Standard errors are reported in parentheses. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively.

	Rural unbanked (1)	Rural credit share (2)	Rural savings share (3)	Rural banked (4)	Priority sector (5)	Cooperative sector (6)
Number of bank branches per capita in 1961*(1961-2000) trend	0.075**	0.178	-0.027	0.141***	-0.081	0.415
	(0.028)	(0.209)	(0.235)	(0.012)	(0.626)	(0.337)
Number of bank branches per capita in 1961*(1977-2000) trend	-0.246***	-1.095**	-0.820***	-0.072***	0.085	0.018
	(0.030)	(0.434)	(0.252)	(0.020)	(0.865)	(0.416)
Number of bank branches per capita in 1961*(1990-2000) trend	0.168***	0.873***	0.434*	0.100**	-0.180	-0.181
	(0.042)	(0.263)	(0.229)	(0.041)	(0.333)	(1.013)
Post-1976 dummy*(1977-2000) trend	0.340	-0.302	-0.167	0.530**	-3.369	-3.798
	(0.251)	(1.495)	(0.777)	(0.187)	(2.402)	(2.237)
Post-1989 dummy*(1990-2000) trend	-0.238	1.947	0.443	-0.404***	-0.048	-3.318
	(0.152)	(1.490)	(0.533)	(0.103)	(1.858)	(2.803)
Fixed effects:						
Year	Yes	Yes	Yes	Yes	Yes	Yes
State	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
F-test 1	16.87	12.80	25.67	8.97	0.00	5.48
F-test 2	0.49	0.10	9.00	27.22	1.79	0.06
Adjusted-R^2	0.963	0.879	0.870	0.981	0.863	0.806
Observations	636	512	512	636	512	494

TABLE IA6: HETEROGENEOUS TREATMENT EFFECTS BY HUMAN CAPITAL NEEDS

This table presents results ruling out concerns related to proxy entrepreneurship. Columns 1 and 2 present results for all states while columns 3 and 4 present results for the five early reforming states. The dependent variable is an indicator variable for whether a female starts a business in a two-digit industry i, state s, in year t. *Post reform* is an indicator variable equal to 1 from the reform year and onwards. Industries are classified as *High* if their human capital index (Ciccone and Papaioannou, 2008) in the pre-treatment period is in the top tercile and quartile of the distribution, and interacted with the *Post reform* dummy. Columns 1 and 3 present results based on the tercile measure while columns 2 and 4 present results based on the quartile measure. The sample is restricted to business owners from treated religious communities. Additionally, the sample is restricted to manufacturing industries given the index measure is only available for manufacturing. The coefficients are estimated using ordinary least squares (OLS). Standard errors are corrected for heteroscedasticity and autocorrelation and clustered by state and year. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively. Data Source: All India Micro Small & Medium Enterprise Census.

	All states		Early states	
	(1)	(2)	(3)	(4)
Post reform × High	-0.004	-0.001	-0.005	-0.000
	(0.003)	(0.003)	(0.003)	(0.003)
Fixed effects:				
Industry x Year	Yes	Yes	Yes	Yes
State x Year	Yes	Yes	Yes	Yes
State x Industry	Yes	Yes	Yes	Yes
Adjusted-R^2	0.12	0.12	0.10	0.10
Observations	626,359	626,359	245,690	245,690

TABLE IA7: SOCIAL NORMS AND BUSINESS FORMATION, RURAL AREAS

This table presents results from regressions examining heterogeneity in business formation based on regional differences in discriminatory social norms. Columns 1 and 2 present results for all states, while columns 3 and 4 present results for the early reforming states. The dependent variable is an indicator variable for whether a woman starts a business in a two-digit industry i, state s, in year t. *Post reform* is an indicator variable equal to 1 from the reform year and onwards. Districts are classified as *Low discrimination* if the number of estimated missing women (Anderson and Ray, 2010), computed as the difference between the actual number of women per 1000 men minus the counterfactual number of women per 1000 men, is in the top tercile and quartile of the distribution. Columns 1 and 3 present results for the tercile measure, while columns 2 and 4 present results for the quartile measure. The sample is restricted to business owners from treated religious communities. The coefficients are estimated using ordinary least squares (OLS). Standard errors are corrected for heteroscedasticity and autocorrelation and clustered by state and year. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively. Data Source: All India Micro Small & Medium Enterprise Census.

	All states		Early states	
	Tercile	Quartile	Tercile	Quartile
	(1)	(2)	(3)	(4)
Low discrimination	0.005***	0.007***	-0.004	-0.007
	(0.002)	(0.002)	(0.005)	(0.006)
Post reform × Low discrimination	0.026***	0.012*	0.039***	0.026***
	(0.008)	(0.006)	(0.010)	(0.009)
Fixed effects:				
Industry × Year	Yes	Yes	Yes	Yes
State × Year	Yes	Yes	Yes	Yes
State × Industry	Yes	Yes	Yes	Yes
Adjusted-R^2	0.21	0.21	0.20	0.20
Observations	419,795	419,795	186,556	186,556

TABLE IA8: PERFORMANCE OF THE MARGINAL ENTREPRENEUR, ALTERNATE MEASURES

This table presents results from regressions which compares alternative measures of ex-post performance between new female and male businesses created around the inheritance reform. Columns 1 and 2 in both panels present results for all states while Columns 3 and 4 in both panels present results for the early reforming states. The dependent variable in panel A is an indicator variable which takes the value of 1 if the business experienced a decline in networth between 2008 and 2009 and zero otherwise while the dependent variable in panel B is an indicator variable which takes the value of 1 if the business experienced a decline in gross output over the same period. *Female* is an indicator variable for whether the individual is a female. *Post reform* is an indicator variable equal to 1 from the reform year and onwards. The sample is restricted to Hindu business owners only. Standard errors are corrected for heteroscedasticity and auto correlation, and clustered by household. Standard errors are reported in parentheses. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively. Data Source: All India Micro Small & Medium Enterprise Census.

	Panel A: Decline in net worth			
	All states		Early states	
	(1)	(2)	(3)	(4)
Female	0.001	0.001	0.001	0.002
	(0.001)	(0.001)	(0.002)	(0.002)
Post reform x Female	-0.006***	-0.006***	-0.007**	-0.007***
	(0.002)	(0.002)	(0.003)	(0.003)
Fixed effects:				
Industry x Year	Yes	Yes	Yes	Yes
State x Year	Yes	Yes	Yes	Yes
State x Industry	No	Yes	No	Yes
p-val: $\beta_{\text{Female}} + \beta_{\text{Post}\times\text{Female}} = 0$	0.00	0.00	0.00	0.00
Adjusted-R^2	0.04	0.05	0.05	0.05
Observations	991,653	991,653	374,522	374,522

	Panel B: Decline in gross output			
	All states		Early states	
	(1)	(2)	(3)	(4)
Female	0.009***	0.007**	0.010***	0.009***
	(0.003)	(0.003)	(0.003)	(0.002)
Post reform x Female	-0.010***	-0.007**	-0.008**	-0.006**
	(0.004)	(0.003)	(0.003)	(0.003)
Fixed effects:				
Industry x Year	Yes	Yes	Yes	Yes
State x Year	Yes	Yes	Yes	Yes
State x Industry	No	Yes	No	Yes
p-val: $\beta_{\text{Female}} + \beta_{\text{Post}\times\text{Female}} = 0$	0.54	0.96	0.09	0.08
Adjusted-R^2	0.08	0.10	0.02	0.03
Observations	991,653	991,653	374,522	374,522

TABLE IA9: EMPLOYMENT BY GENDER IN NEW FEMALE ENTERPRISES

This table presents results ruling out concerns related to proxy entrepreneurship. Panel A reports tests examining business formation by females using female employment share to classify industries while panel B examines the nature of employment within these firms. In both panels, columns 1 and 2 present results for all states while columns 3 and 4 present results for the early reforming states. The dependent variable in panel A is an indicator variable for whether a Female starts a business in a two-digit industry i, state s, in year t while the dependent variable in panel B is the natural logarithm of one plus the total employment (by gender) in each firm. *Post reform* is an indicator variable equal to 1 from the reform year and onwards. *Female-dominated industry* is a dummy variable that takes a value of 1 if in the year before the reform the share of Female employment within an industry is the above the median share, and zero otherwise. Additionally, each industry is ranked based on the pre-reform median share. In panel A, columns 1 and 3 present results based on the median measure while columns 2 and 4 present results based on the rank measure. The sample is restricted to business owners from treated religious communities. All regressions include State-Industry-Year fixed effects. The coefficients are estimated using ordinary least squares (OLS). Standard errors are corrected for heteroscedasticity and autocorrelation and clustered by state and year. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively. Data Source: All India Micro Small & Medium Enterprise Census.

	Employment by gender			
	All states		Early states	
	(1) Female	(2) Male	(3) Female	(4) Male
Female	0.300***	-0.278***	0.249***	-0.300***
	(0.017)	(0.017)	(0.017)	(0.026)
Post reform x Female	0.079***	-0.234***	0.133***	-0.220***
	(0.021)	(0.028)	(0.023)	(0.035)
Fixed effects:				
Industry x Year	Yes	Yes	Yes	Yes
State x Year	Yes	Yes	Yes	Yes
State x Industry	Yes	Yes	Yes	Yes
p-val: $\beta_{\text{Female}} + \beta_{\text{Post}\times\text{Female}} = 0$	0.00	0.00	0.00	0.00
Adjusted-R^2	0.38	0.39	0.25	0.43
Observations	982,194	982,194	369,923	369,923

TABLE IA10: FEMALE ENTREPRENEURSHIP BY INDUSTRY TYPE, UNTREATED GROUPS

This table presents results from regressions examining female entrepreneurship by industry. Columns 1 and 2 present results for all states while columns 3 and 4 present results for the early reforming states. The dependent variable is an indicator variable for whether a female starts a business in a two-digit industry i, state s, in year t. *Post reform* is an indicator variable equal to 1 from the reform year and onwards. *Female-dominated industry* is a dummy variable that takes a value of 1 if the share of female entrepreneurs within an industry in the pre-treatment period is in the top tercile or quartile of the distribution, and zero otherwise. Columns 1 and 3 present results based on the tercile measure while columns 2 and 4 present results based on the quartile measure. The sample is restricted to business owners from untreated religious communities. The coefficients are estimated using ordinary least squares (OLS). Standard errors are corrected for heteroscedasticity and autocorrelation and clustered by state and year. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively. Data Source: All India Micro Small & Medium Enterprise Census.

	All states		Early states	
	(1)	(2)	(3)	(4)
Post reform × Female-dominated industry	0.002	-0.002	-0.010	-0.017
	(0.013)	(0.015)	(0.016)	(0.018)
Fixed effects:				
Industry x Year	Yes	Yes	Yes	Yes
State x Year	Yes	Yes	Yes	Yes
State x Industry	Yes	Yes	Yes	Yes
Adjusted-R^2	0.12	0.12	0.09	0.09
Observations	106,393	106,393	27,710	27,710

TABLE IA11: FEMALE ENTREPRENEURSHIP AROUND THE REFORM, UNREGISTERED SAMPLE

This table reports additional results from regressions examining business formation among women around the inheritance reform. The sample is restricted to unregistered businesses surveyed by the MSME Census. The dependent variable is an indicator for a female business in a two-digit industry i, state s, in year t. In both panels, column 1 presents the results for all states while column 2 presents the results for the early reforming states. *Treated* refers to individuals belonging to the four religious communities, i.e., Hindus, Sikhs, Buddhists, and Jains while the non-treated consists of individuals from other religious groups, i.e., Muslims, Christians, Jews, and others. *Post reform* is an indicator variable if the year of the startup is greater than (or equal to) the state-specific reform year. All regressions include state-year, industry-year, and state-industry fixed effects and are estimated using ordinary least squares (OLS). Standard errors are clustered at the state-year level, and are robust to heteroscedasticity. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively. Data Source: All India Micro Small & Medium Enterprise Census.

Dependent variable	$\mathbb{1}_{\text{Female business}}$	
	All states	Early states
	(1)	(2)
Treated	0.019***	0.038***
	(0.007)	(0.014)
Post reform × Treated	0.031***	0.031*
	(0.010)	(0.017)
Fixed effects:		
Industry × Year	Yes	Yes
State × Year	Yes	Yes
State × Industry	Yes	Yes
Adjusted-R^2	0.15	0.15
Observations	98,504	22,968

TABLE IA12: FEMALE ENTREPRENEURSHIP AROUND THE REFORM, BY STATES

This table reports results from regressions examining business formation among women from treated religions (relative to women from non-treated religions) around the inheritance reform. The dependent variable is the fraction of businesses started by women from treated religious communities (relative to women from non-treated religions) in a two-digit industry i, state s, in year t. Columns 1 and 2 presents the results for all states while columns 3 and 4 presents the results for the early reforming states. *Treated* refers to individuals from the four religious groups, i.e., Hindus, Sikhs, Buddhists, and Jains while the *non-treated* consists of individuals from the other religious groups, i.e., Muslims, Christians, Jews, and others. *Post reform* is an indicator variable if the year of the startup is greater than (or equal to) the state-specific reform year. *Female* is an indicator variable for females. All regressions are estimated using ordinary least squares (OLS). Standard errors are clustered at the state-year level, and are robust to heteroscedasticity. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively.Data Source: All India Micro Small & Medium Enterprise Census.

	Andhra Pradesh	Karnataka	Kerala	Maharashtra	Tamil Nadu	Late states
	(1)	(2)	(3)	(4)	(5)	(6)
Treated	0.205***	0.463***	0.108***	0.387***	0.369***	0.405***
	(0.024)	(0.025)	(0.025)	(0.033)	(0.021)	(0.008)
Post reform x Treated	0.256***	0.193***	0.086**	0.240***	0.271***	0.087**
	(0.037)	(0.031)	(0.033)	(0.038)	(0.026)	(0.037)
Fixed effects:						
Industry x Year	Yes	Yes	Yes	Yes	Yes	Yes
State x Year	Yes	Yes	Yes	Yes	Yes	Yes
State x Industry	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted-R^2	0.14	0.36	-0.19	0.30	0.33	0.38
Observations	3,212	3,532	2,550	3,462	3,960	25,408

TABLE IA13: FEMALE ENTREPRENEURSHIP AROUND THE REFORM, STATE LEVEL

This table reports results from state-level regressions examining business formation among women around the inheritance reform. The dependent variable is the ratio of number of female businesses relative to number of male business each year. *Treated* refers to individuals belonging to the four religious communities, i.e., Hindus, Sikhs, Buddhists, and Jains while the non-treated consists of individuals from other religious groups, i.e., Muslims, Christians, Jews, and others. *Post reform* is an indicator variable if the year of the startup is greater than (or equal to) the state-specific reform year. All regressions include state and year fixed effects and are estimated using ordinary least squares (OLS). Standard errors are clustered at the state-level, and are robust to heteroscedasticity. *,**, and *** indicate significance at the 10%,5% and 1% levels (two-sided) respectively.Data Source: All India Micro Small & Medium Enterprise Census.

	(1)	(2)
Post reform	1.175**	1.028**
	(0.520)	(0.455)
Fixed effects:		
State	Yes	Yes
Year	Yes	Yes
Controls	No	Yes
Adjusted-R^2	0.40	0.44
Observations	799	584

Appendix A.1 Inheritance reforms in India

Under traditional Hindu law, women had almost no rights to property ownership. Inheritance laws mirrored traditional law and were governed by two main schools of Hindu law, *Mitakshara*, and *Dayabhaga*. The Mitakshara school prevailed in most of India, whereas the Dayabhaga school held in Bengal and Assam. The Mitakshara school was further sub-divided into four schools namely: *Dravida (Madras)* School in South India, *Maharashtra (Bombay)* School, *Banares* School in Orissa and Bihar, and *Mithila* School in Uttar Pradesh. These sub-schools differed with regard to their succession laws; the Madras and Bombay sub-schools, in particular, were somewhat more progressive in recognizing the rights of women (Halder and Jaishankar, 2008). None of the traditional schools, however, gave equal inheritance rights to men and women; the 1956 Hindu Succession Act (HSA 1956), an effort to codify and reform Hindu personal law following Indian Independence, was an improvement over all of them. The act attempted to unify different traditional schools of law that varied not only from region to region but sometimes by caste within regions. Inherent differences across the schools made passage of the act a huge challenge and subject to much debate at the time (Kishwar, 1994). As such, the Succession Act was by far the most controversial part of the reform to Hindu personal law.

The most important distinction between the two main schools of law related to their classifications of property. The Mitakshara system made a distinction between "joint family property" and "separate property."

Joint family property consists of ancestral property, i.e., property inherited from the father, paternal grandfather, or paternal great-grandfather, while *Separate* property comprises property that is self- acquired if acquired without detriment to the ancestral estate, and any property inherited from persons other than the father, paternal grandfather, or paternal great-grandfather (Agarwal, 1994). Crucially, separate property could be bequeathed at will, while rights to joint family property was limited to male members of the dynasty.[23] The distinction was crucial as it created significant inequity in inheritance among siblings, especially constraining women's ability to inherit the land to rarely, if ever.[24]

The original provisions on succession by women, framed by the B. N. Rau committee and piloted by B. R. Ambedkar in 1947, incorporated the concept of daughters as coparceners in the joint family property. These proposals met with significant opposition from those who were not in favor of daughters inheriting property from their families at the cost of their brothers. Consistent with the regional differences in the

[23] more than 65% of people die every year without making any wills, and this proportion is higher in rural areas. Recent newspaper articles have put this number higher, at 80%. The low prevalence of wills in India suggests that the HSA 1956 is the primary determinant of inheritance patterns within households.

[24] In her exhaustive study of gender and land rights in India, Agarwal (1994) concludes that women seldom inherit land. In particular, she states: "Ethnographic information, although it is extremely fragmentary, consistently indicates that women in traditionally patrilineal communities of South Asia rarely realize the rights that contemporary laws have promised them. Custom still dominates practice. Hence the vast majority of women do not inherit landed property as daughters, most don't do so even as widows and few women inherit in other capacities. To the extent women inherit is usually under very restricted conditions."

traditional schools of law, the northern states dismissed the more progressive ideas of the southern states, and by a majority vote, the proposed clauses allowing equal inheritance rights to women were removed from the act, and the traditional laws remained intact on this issue.

According to HSA 1956, upon the intestate death of the Hindu male household head, daughters of the head were equal inheritors along with sons of their father's separate property and his "notional" portion of joint family property. Daughters did not have the direct inheritance rights of the sons to joint property. Sons had the direct right by birth to the share of joint family property in addition to the share of the father's own property.[25] Further, in rural India, the most common form of family property is land.[26] Thus, under HSA 1956, women continued to suffer significant discrimination concerning inheritance and ultimately asset ownership.

The five states that subsequently introduced amendments to the Hindu Succession Act of 1956 were those whose traditional schools of law (the Madras and Bombay sub-schools) had previously agreed to the inclusion of women's inheritance rights at the time of passage of the original act, in provisions that parliament overruled at the time. These later state-level amendments included precisely the original provisions framed by the committee in 1947 but removed from the act of 1956. Given the historical evolution of the amendment, no precise reasons for the specific years in which these different states enacted their amendments (Kerala in 1976; Andhra Pradesh in 1986; Tamil Nadu in 1989; Maharashtra and Karnataka in 1994) are apparent.

[25]Besides, sons could also demand the partition of joint family property at will while daughters could not. For example, if the joint family property is pertaining to a dwelling house, sons could demand a partition, but daughters were only allowed the right of residence while being excluded from the right to ownership or possession.

[26]In my dataset, I find that ancestral property constitutes around 80% of total household property in India, suggesting that the salience of the inheritance rights reform was indeed quite high in India.

Appendix A.2 Data Appendix

The Micro, Small and Medium Enterprises (MSME) sector is a significant contributor to the Indian economy. Official figures from the Ministry of MSME, state that this sector contributes 8% of the National GDP and comprises 50% of India's total manufactured exports, 45% of India's total industrial employment and 95% of all industrial units.

The fourth All India Census of the MSMEs was conducted to give a comprehensive overview of the sector. It involved collection of data from 2.4 million industrial units across all states in India. This census was a joint endeavor between the federal government and the state government involving experts from various government organizations and agencies. The state directorate of industries identified manpower separately for this data collection task involving enumeration, coding, and supervision. The enumerators were given prescribed formats and data inspectors were assigned the responsibility of coding which was supervised and scrutinized by the supervisors. Subsequently, all the filled-in formats were sent to the designated Centre at New Delhi upon the immediate completion of the field work.

The data was collected till 2009, results of which were published in 2011-12. The census adopted different methodology for the registered and the unregistered sectors. While complete enumeration of enterprises was adopted for the registered sector, a sample survey was resorted to for the unregistered sector which includes enterprises eligible for registration as a small-scale industry (SSI). Importantly, the census contains information only on surviving firms. Specifically, the census enumerators verify whether an enterprise is found at a particular address. The details of the enterprise are obtained from District Industries Center(DIC) maintained by the respective state governments. In the case of an enterprise not found at a particular location, the census enumerator checks for address changes at the DIC or any other state agency. Such an enterprise which is non-traceable is said have closed down. According the final report by the Ministry of MSME, the percentage of closed enterprises was around 22% and around 30% when including non-traceable enterprises. However, the business closure does not systematically vary across religion, gender, and or state-specific reform year.