administrative sciences

MDPI

Article

Bureaucratic and Societal Determinants of Female-Led Microenterprises in India

Devlina and Santosh Kumar Sahu *

Department of Humanities and Social Sciences, Indian Institute of Technology Madras, Chennai 600036, Tamil Nadu, India
* Correspondence: santosh@iitm.ac.in

Abstract: This study examines the barriers to female entrepreneurship in India's microenterprise sector through society and bureaucracy. The study uses grammatical genders in languages to capture the societal attitudes towards female entrepreneurship. Using a probit model, it was found that states where the spoken language is two-gendered, have poor representations of women in entrepreneurial positions compared with states with languages that are multi-gender or no gender. It is further argued that these societal attitudes also reflect through people in power, such as bureaucrats, credit managers, bankers, etc., which affects female entrepreneurship. The paper finds empirical evidence for the *grease-the-wheel* hypothesis, i.e., in the presence of a discriminating inefficient business ecosystem, women entrepreneurs use non-market strategies such as corruption to alter decisions in their favour. Thus, an effort to reduce corruption at an immature stage, when these societal institutions have not yet developed, might cause more harm than benefit.

Keywords: female entrepreneurship; corruption; microenterprises; language; grammatical genders; India

JEL Classification: D73; J16; L26; Z13

Citation: Devlina, and Santosh Kumar Sahu. 2023. Bureaucratic and Societal Determinants of Female-Led Microenterprises in India. *Administrative Sciences* 13: 68. https://doi.org/10.3390/admsci13030068

Received: 29 December 2022
Revised: 14 February 2023
Accepted: 22 February 2023
Published: 27 February 2023

1. Introduction

Women's equal access to economic, political, and financial opportunities is crucial to a country's sustainable growth and development. Gender equality and women empowerment is the fifth goal of the United Nations (UN) Sustainable Development Goals (SDGs). This includes the target of improving women representation in the government, at both national and local level, as well as in businesses through improved opportunities for women in managerial roles. This calls for studies focusing on what prevents women from taking up entrepreneurial positions. A boost in female entrepreneurship can further boost female labour force participation (Chiplunkar and Goldberg 2021). This is important, since inefficiencies creating a gender differential imply countries are not able to utilise their human capital to the fullest, constraining their growth potential (Bardasi et al. 2011).

The performance and barriers of female-run firms has been studied quite widely. While some studies claim firms with women owners or managers perform better (Dezso and Ross 2012; Jain 2022), most argue the opposite (Fairlie and Robb 2009; Allison et al. 2023). Amongst the existing barriers to female entrepreneurship, access to credit has been identified as the biggest constraint to their under-performance (de Mel et al. 2009; Muravyev et al. 2009). While the role of traditions, culture and patriarchal beliefs in shaping women entrepreneurship is acknowledged in the literature (Ojediran and Anderson 2020), no formal empirical study evaluating the impact of such social systems on women entrepreneurship exists. The current study argues that while the above is true, societal attitudes, reflecting traditional belief systems and social and cultural norms of a country, are a significant and a more prominent factor affecting the participation of women in entrepreneurial positions. The paper further argues that these societal attitudes also reflect

through people in power, such as Government officials, bureaucrats, credit, and bank managers etc. Thus, as a mitigation strategy to the socially created inefficient and unfavourable entrepreneurship ecosystem, women use corruption as an incentive mechanism to alter the behaviour of these authorities in their favour.

This study uses an innovative way to capture societal attitudes towards women through gender markings in the grammar of languages. There is a recent use of grammatical genders in languages as a factor affecting gender inequality and discrimination, and it is found to be more critical than the traditionally believed indicators of economic development, political system, and religion (Santacreu-Vasut et al. 2013). This paper argues that spoken language is essential in developing gender-based ideas and conditions people to accept gender roles from an early development stage of childhood (Hicks et al. 2015). Thus, grammatical genders in languages are an excellent proxy to capture the societal norms and attitudes towards women.

The innovation of the study also lies in the use of recent data on the microenterprise sector of India by the World Bank Enterprise Survey. The Micro, Small, and Medium Enterprises (MSME) sector contributes to almost 30% of India's GDP and nearly 50% of Indian exports[1]. As per the fourth All India Census of MSME (2006–07), microenterprises constitute almost 95 percent of the MSME units with a 45% share of the gross output, making them the most significant part of the MSME family. India scored 30 out of 100 on the degree to which legal frameworks promote, enforce, and monitor gender equality with respect to employment and economic benefits in 2018 (SDG, UN India)[2]. As per the Sixth Economic Census of India, a meagre 13.76 percent of the total number of establishments were run by women entrepreneurs, comparable to the share of women owners in the MSME sector of India.

The objective of the current study is two-fold. First, it looks at the impact of societal attitudes towards women as a possible hindrance to female entrepreneurship in the microenterprise sector of India. Second, it studies the impact of bribery as a form of corruption by women entrepreneurs as a mitigation strategy. Such studies are scant in the literature, particularly in the Indian context. The paper fills this gap and presents a novel approach to using grammatical genders to capture societal attitudes towards women. We find that female entrepreneurship is poor in states where the major spoken language is two-gendered compared with states with languages having multi-gender or no gender in their grammar. We also find a positive impact of corruption on female entrepreneurship, supporting *grease the wheel* hypothesis. The societal attitudes reflected through people in power, such as bureaucrats, credit-approving officials, etc., also affect female entrepreneurship. Using non-market strategies such as corruption can alter their behaviour, thus, positively affecting female entrepreneurship.

The rest of the paper is organised in the following way. The next section provides a brief review of the literature. Section 3 builds the hypothesis. Section 4 discusses the data and methods adopted. Section 5 presents the descriptive and empirical results, and finally, Section 6 concludes.

2. Literature Review

2.1. Gender and Performance

Gender differences in economic decision-making have been an area of interest for a long time. Risk taking is often considered as a crucial ingredient in making a strong leadership position. Studies have found women to be more risk-averse than men. Jianakoplos and Bernasek (1998) find that single women tend to invest less in risky financial assets than men for the case of USA. de Mel et al. (2009) found that male microenterprise owners could make larger profits from random grants offered than women owners in Sri Lanka. Chaudhuri et al. (2020) found that women owned MSMEs performed poorly in the case of India. Bardasi et al. (2011) find women-owned firms to be performing poorly in terms of firm size, firm efficiency, and firm growth in Europe, Central Asia, and Sub-Saharan Africa. However, the gap is lesser regarding firm efficiency and growth. Johnson and Powell

(1994) argue that women are discriminated in being offered leadership and managerial roles, but there is no difference in their risk aptitude or quality of decision-making in managerial positions. They find some evidence of risk aversion amongst females in non-managerial positions. However, they argue that differences in other factors, such as access to information, experience, and formal training, could be the reason. Jain (2022), however, finds that women in higher positions in firms lead to better performance in these firms, which is positively moderated by women empowering gender norms at the state level for India. Atkinson et al. (2003) also find no differences in risk propensity amongst male and female asset managers. However, they find the initial inflow of funds lower for female managers than for males. Constraints women entrepreneurs face are more prominent due to supply-side discrimination, as credit managers and banker's treat the loan applications of men and women differently. Muravyev et al. (2009) find that female-managed firms are less likely to get a bank loan approved and, even if they do, face higher interest rates than their male counterparts. Chaudhuri et al. (2020) also finds women owners face larger credit constraints in the case of the Indian MSME sector. Bardasi et al. (2011) do not find gender discrimination in access to formal business credit sources. However, they find that women owners seek lesser loans in European and Central Asia compared to Latin American and Sub-Saharan African countries.

2.2. Gender Inequality, Social Norms, and Grammatical Genders

Santacreu-Vasut et al. (2013) are one of the first studies to incorporate the role of grammatical genders in economic studies to show that male-female distinction in languages is strongly linked with socio-economic indicators. The paper studies the role of grammatical genders in adopting political quotas for women to increase their political participation. They find grammatical gender a more critical determinant of adopting gender political quotas than the traditionally believed indicators of economic development, political system, and religion. Later Shoham and Lee (2018) found that higher grammatical gender markings in the dominant spoken language of countries resulted in a higher gender wage gap. Hicks et al. (2015) study the role of grammatical genders in determining sex-based tasks amongst US immigrants. They find a higher likelihood of allocating household tasks based on gender roles among immigrants whose native language has gender markers. These effects are persistent and, if acquired at a key developmental stage of childhood, are not affected by the duration of stay in the US. In a cross-country analysis, Jha and Sarangi (2018) find grammatical genders of a country's dominant language have strong predictive powers for female labour force participation, even after controlling for income, institutions, and culture.

2.3. Corruption and Gender

There are two prominent strands in the corruption literature. Sand, the wheel hypothesis, claims corruption to be damaging and negatively affecting growth, development, and investments (Mauro 1995; Méon and Sekkat 2005). The grease-the-wheel hypothesis suggests that corruption can have positive impacts on economic parameters when institutions are inefficient and cumbersome bureaucracy exists (Vial and Hanoteau 2010; Wang and You 2012; Zhou et al. 2022). Corruption becomes the second-best solution in the presence of inefficiencies.

It is argued in the literature that culture and social norms play an important role in normalising corruption (Treisman 2000; Jha and Panda 2017). The collective action theory suggests that cost of corruption is lower when everyone is corrupt, i.e., corruption itself becomes a social norm (Bardhan 1997). Jha and Panda (2017) find empirical evidence of high corruption in collectivist countries. They argue that behaviour of individuals in collectivist societies is influenced by the group's norms, and their actions in favour of the community are rewarded.

The above discussion brings us to two conclusions. First, gender-discriminating societal attitudes can be viewed as a form of inefficiency where corruption can be used as a way around. Secondly, when society has normalized corruption, using it as a means

to serve one's purpose may not seem to be a daunting task. Some studies have found women to be less tolerant towards corruption and countries with a larger share of women in their parliament to be low in corruption (Dollar et al. 2001; Swamy et al. 2002). However, Alatas et al. (2009) find that this is true only for countries perceived to be less corrupt. For highly perceived corrupt countries such as India, there are no differences in the use of bribery, both in the case of giving and taking bribes. Jha and Sarangi (2018) also find a significant negative impact of women in policy-making positions on corruption. However, no such impact was found for women in decision-making positions, such as women owners and managers. Esarey and Chirillo (2013) argue that the interplay between women and corruption is highly contextual. Women in autocratic countries, where corruption is a part of doing business, face greater political and social pressure to follow these norms because of the risks created by gender discrimination. Thus, the idea of women participating in corruption is not surprising. It is argued that women use non-market strategies such as bribing to mitigate these societal constraints of stereotypes, prejudices, and traditional belief systems. Kim et al. (2022) test the impact of women's ownership of small businesses on bribery in emerging market economies. They find that women's ownership does not directly affect a firm's bribing decisions. Women may use bribing as a strategy to compensate for the other constraints and lost opportunities they face. Institutional characteristics such as education, gender equality and good governance moderate this positive effect. Wellalage et al. (2019) find that corruption has a detrimental effect on credit access for small and medium enterprises (SMEs) in South Asian economies, but female-owned SMEs are more effective at using bribery to secure credit. They find male owners who bribe are more financially constrained than non-bribing male-owned SMEs. However, the opposite is true for female-owned SMEs.

3. Hypothesis Building

Self-employment is a choice of livelihood for many marginalised sections that face labour market discrimination, both in terms of employability and wages (Deshpande and Sharma 2013). However, for women, there is another option: to remain unemployed. Around 63.7% of women were out of the labour force in India for 2019–20, which was only 7.9% for men (Mahambare 2022). We argue that there are two major reasons behind the poor participation of women in the labour force, especially in entrepreneurial roles.

The first is the societal beliefs regarding gender roles. Gender stereotyping often dictates the role of men and women, impacting female entrepreneurship through a worse work-family balance (Cesaroni et al. 2018). India follows a patriarchal society where the traditional role of women is believed to be taking care of the household and family, and to raise children (Das 2006). India's traditional belief systems looked down upon working women and compartmentalised women into traditional household jobs (Kapsos et al. 2014). The men of the household are responsible for earning, and the heads are usually elder male figures. This is largely true for most parts of the country, except for some parts of north-eastern states such as the *Khasi* clan of Meghalaya[3] that follow a matrilinear society. This was also a historical practice for some parts of Kerala (Chacko 2003). Changing these traditional belief systems takes time and is an extremely slow process. Put simply, women are not 'allowed' to work. A further problem arises when women want to step into entrepreneurial positions. Subordinate men are unwilling to take orders from a female superior/owner or manager. Chiplunkar and Goldberg (2021) find that for women entrepreneurs, the cost of hiring a worker is on average 15 percentage higher than men in the Indian formal business sector. Women entrepreneurs, however, had an advantage in hiring female workers, especially in the informal sector.

Studies argue that the way the grammar of a language incorporates gender can be a good proxy to capture these traditional belief systems (Hicks et al. 2015). Many studies have used grammatical genders to capture gender inequality in terms of wage (Shoham and Lee 2018), women's presence in parliament (Santacreu-Vasut et al. 2013), and education attainment (Davis and Reynolds 2018).

We can classify languages into four broad categories by how gender is built into their structure. These are (1) no gender, (2) gender identification in pronouns only, (3) two-gendered (masculine vs. non-masculine; masculine vs. feminine) and (4) more than two or multi-gendered (masculine, feminine, human/non-human, animate/in-animate, etc.) Some spoken languages of the eastern and north-eastern parts of India, such as Bengali, Odia, and Assamese do not have any gender differences. The southern states of Tamil Nadu, Andhra Pradesh, and Telangana, as well as the western states of Gujarat and Maharashtra, have more than two gender classifications, while Kerala has gender differences in their pronouns only. Most northern and western states have only two genders in their grammar. We believe that people with languages having no gender difference would be more open to women's participation in the labour force, followed by gender in pronouns only. A two-fold classification is often stricter and more rigid than a multiple-fold classification. People speaking two-gendered languages might be less open to the female of the households working compared to people speaking multi-gendered languages (Gay et al. 2014). We thus hypothesise that grammatical genders in languages affect women's participation in entrepreneurial roles.

H1. *Grammatical gender in languages affects female entrepreneurship by capturing the societal attitude towards women.*

The societal constraints can also be manifold through the aided sectors of entrepreneurial activities such as credit institutions, local bureaucrats and officials who are essentially part of the local society and share similar societal attitudes. Thus, to some extent, these societal constraints can also determine how conducive the business environment is to women entrepreneurs and their growth. However, their societal attitude can be nudged through monetary influences that come along with the power vested upon them by their positions, i.e., corruption. Without such incentives, societal attitudes dominate, which can be toned down through corrupt activities such as bribing. Thus, we hypothesise that bureaucratic regulations and the business environment could be favourable to female entrepreneurs through corruption.

H2. *Bribing positively affects female participation in entrepreneurial activities.*

4. Data and Methods

For the current study, we make use of the recent World Bank survey data on microenterprises in India, collected in 2021. The universe of the survey is the registered business sector of India with less than five employees, as taken from the Sixth Economic Census of India for nine major business-hub cities located in nine different states of India. These are Ludhiana, Punjab; Surat, Gujarat; Jaipur, Rajasthan; Mumbai, Maharashtra; Varanasi, Uttar Pradesh; Sehore, Madhya Pradesh; Kochi, Kerala; Hyderabad, Telangana and Tezpur, Assam. The businesses are registered under any State or Central Government Act/Body, which also translates into having a business PAN and a GST number[4]. The total number of firms surveyed were 998[5]. Out of these 85 firms (8.5%) are female owned firms, of which 54 have 100 percent ownership and 10 have 50 percent ownership. 96 (9.62%) firms have women in their top managerial positions, out of which 50 are also women-owned firms. Following Chaudhuri et al. (2020), we identify female entrepreneurs as both owners and top managers of firms. Thus, we have 131 (13.13%) firms with women in entrepreneurial roles.

We test the discussed hypothesis in two ways. First, we look at descriptive statistics and draw insights from the data distribution. We then build an econometric model, as described below, and test for statistical relations using a probit model.

$$\Pr(female = 1) = \alpha + \beta_1 GL_i + \beta_2 bribe_i + \gamma X_i + \delta Z_i + e_i \quad (1)$$

where female is a binary variable taking value one if the firm has women owners or top managers, GL captures the grammatical gender of the major spoken language, the bribe is a dummy indicating whether the firm was demanded a bribe or not, X represents

entrepreneur characters such as education and experience and Z represents firm-level controls such as sales and age. e_i is the classical error term.

As a first step towards creating the GL variable, we assign a score to these languages based on the number of genders in the grammar. Assamese has no gender distinction in their language, hence are given a score of one[6]. Malayalam uses gender classification only in their pronouns and is given a score of two. Marathi, Telugu, and Gujarati have three genders, masculine, feminine and neuter, and given a score of three. For the remaining states of Uttar Pradesh, Madhya Pradesh and Rajasthan, Hindi is the spoken language of the majority of people. Hindi and Punjabi have a two-gendered classification and are given a score of four. Thus, as the scores move from 4 to 1, society's attitude towards women improves, or in other words, the discrimination reduces. We introduce them as multiple dummies, GL2, GL3 and GL4, keeping GL1 as the base. This is explained in Table 1.

Table 1. Construction of the GL (gender-in-languages) variable.

Cities	States	Major Spoken Language	GL Score	Dummy Variables
Varanasi	Uttar Pradesh	Hindi	4	GL4
Sehore	Madhya Pradesh	Hindi	4	GL4
Jaipur	Rajasthan	Hindi	4	GL4
Ludhiana	Punjab	Punjabi	4	GL4
Surat	Gujarat	Gujarati	3	GL3
Hyderabad	Telangana	Telugu	3	GL3
Mumbai	Maharashtra	Marathi	3	GL3
Kochi	Kerala	Malayalam	2	GL2
Tezpur	Assam	Assamese	1	GL1

Bribe is also a dummy variable which takes a value of one if a firm receives a bribe request while applying for any one of the following Government services: water connection, electricity connection, construction-related permit, import license, operating license or during a tax inspection. About 11.5% of firms report receiving at least one such informal payment request.

We control for various other owner and manager level variables, such as highest level of education of owner, number of years of experience of the top manager, and whether the owner has a full-time salaried job. Firm-level characteristics, such as annual sales in financial year prior to the survey, and firm age as measured in 2021, the year of survey, with respect to year when operations began as against year when firms registered officially.

Access to formal sources of credit is crucial to any business. However, female entrepreneurs are at a further disadvantage when it comes to credit access for MSMEs (Chaudhuri et al. 2020). Jha and Bhuyan (2020), argue that financial reforms can promote entrepreneurial activity, especially for nascent businesses, by reducing financial constraints. Thus, we control for firm's financial condition through a dummy variable on financial constraint. A firm is identified to be financially constrained if their most recent loan application was rejected, or they did not apply for a loan due to reasons of (1) complex application procedures, (2) unfavourable interest rates, (3) high collateral requirements, and (4) insufficient size of loan and maturity; or they take a loan from money-lenders, and friends and family for day-to-day operations and/or buying machineries, equipment and vehicles. About 64% of firms fall in this category.

All variable details are provided in Table 2, along with their summary statistics.

Table 2. Summary statistics and variable description.

Variables	Description	Observations	Mean	Std. Dev.	Min	Max
female	Dummy variable taking value 1 if firm has a female owner or top manager	998	0.13	0.34	0	1
GL scores	Grammatical genders in language scores (refer Table 1)	998	3.10	1.01	1	4
bribe	Dummy variable taking value 1 if firm was requested a bribe payment	347	0.33	0.47	0	1
bribe avIR	Industry-region average bribe values	697	0.31	0.40	0	1
ln sales	Log of sales in previous financial year	976	13.91	1.04	10.46	17.73
Education dummy3	Dummy variable taking value 1 if owner has a bachelor's degree or a diploma.	998	0.48	0.50	0	1
Education dummy2	Dummy variable taking value 1 if owner has completed primary or secondary schooling	998	0.45	0.50	0	1
Education dummy1	Dummy variable taking value 1 if owner has no schooling or incomplete primary schooling	998	0.07	0.26	0	1
firm age	2021-year operations begun	957	12.97	9.56	1	67
manager experience	No. of years of experience top manager has	955	12.23	9.21	1	50
owner job	Dummy variable taking value 1 if owner has a full-time job with wage	996	0.10	0.29	0	1
financially constrained	Dummy variable taking value 1 if the firm is financially constrained	998	0.65	0.48	0	1

5. Empirical Analysis

5.1. Descriptive Analysis

The microenterprise units are evenly distributed across all the cities with about 10–12% firms from each. This is clear from column 2 of Table 3. As discussed earlier, out of the total 998 firms surveyed, 13.13 percent of the firms have female entrepreneurs. Their distribution according to the different cities are reported in column 3 of Table 3. The difference here is quite striking. Hyderabad has the highest percentage of female entrepreneurs in the microenterprises. At 73%, this is much higher than the average. Kochi has the second highest share, with only 17% of the microenterprises with female owners or managers, followed by Tezpur. The dominance of the Southern and Eastern states is remarkably clear from this table, so is the poor female participation in the Northern states, especially Punjab (Ludhiana), with not a single unit having a woman in an entrepreneurial position. This is in line with our gender in language scores.

Table 3. Entrepreneurship and corruption: state profiles.

Cities	Percentage of Firms in Total	Firms with Female Entrepreneurs (%)	Percentage of Firms Paid at Least one Bribe [a]	Percentage of Households Faced Corruption [b]	No. of Reported Cases of Corruption per 10 Lakh Population [c]
Hyderabad	10.82	73.15	56.48	74	2.23
Kochi	10.02	17.00	4.00	4	0.00
Tezpur	12.32	11.38	14.63	18	0.04
Mumbai	11.32	7.96	4.42	57	0.51
Surat	11.32	4.42	7.08	37	3.65
Sehore	12.22	3.28	13.11	23	0.04
Varanasi	10.22	1.96	0.00	19	2.22
Jaipur	10.72	0.93	1.87	14	2.36
Ludhiana	11.02	0.00	0.91	42	2.86
Total	100	13.13	11.52	31	3.09

Note: Values of last two columns are for the States these cities belong to, and India for the last row. [a] World Bank Groups. [b] India Corruption Study 2017, Centre for Media Studies (CMS). [c] Prevention of Corruption Act and Related Sections of IPC, Crime in India 2021, National Crime Records Bureau; population data based on census 2011, taken from data.gov.in.

The corruption profile (column 4) is equally interesting. Around 11.5% of the firms report of facing at least one bribe request while Hyderabad again tops the list, followed by Tezpur and Sehore. Surprisingly (or unsurprisingly) not a single unit in Varanasi reports of facing any bribe demand. Thus, we compare the corruption data from the current source with other external data sources as reported in the last two columns. Column 5 reports data for percentage of households that have reported of facing corruption taken from Indian Corruption Study 2017, published by Centre for Media Studies (CMS) while column 6 reports the number of reported cases of corruption per 10 lakh population taken from National Crime Records Bureau (NCRB). These data are representative of the states as a whole, and not the individual cities. There are certain discrepancies in the corruption scores, however, we have to keep in mind that these are corruption cases as faced by the households as against business corruption in the World Bank dataset we use.

The second interesting fact that we observe from the data is the difference in response rate of male vs. female firms. In Table 4 we look at two corruption questions. First is a general, indirect question on how big of an obstacle is corruption to business. This has five categories, and every firm responds to this question. The second is the more specific question on whether a bribe was requested in any of the Government services availed. The columns report the share of firms who responded to the bribe demand questions as a percentage to the obstacle categories they had chosen. For example, 38.7% of firms with male entrepreneurs who do not find corruption to be an obstacle, responded to the bribe demand questions. We see that the percentage value of firms with male entrepreneurs drops along the rows, i.e., a lesser and lesser number of firms respond to the direct questions on bribe as the severity of corruption as an obstacle, as identified by them, increase. This is not the case with female entrepreneurs. Not only they have an overall better response rate, 58% vs. 31.2% for firms with male entrepreneurs, but the response rates also improve as the severity of corruption as an obstacle increase.

Table 4. Bribe demand responses as a percentage to how big an obstacle corruption is.

	Percentage of Firms Responding to the Bribe Demand Questions	
How much of an Obstacle is Corruption	**Male Entrepreneurs**	**Female Entrepreneurs**
No obstacle	38.70	46.81
Minor obstacle	30.24	67.92
Moderate obstacle	23.39	60.00
Major obstacle	23.21	57.14
Very severe obstacle	24.00	50.00
Average	31.26	58.02

The better response rate of women is further validated by the data on biggest challenge to business. Access to finance is the biggest challenge for female entrepreneurs (40.5%) followed by corruption (9.2%). This is 18.7% and 14.5% for male entrepreneurs. If we add political instability, crime, theft and disorder and courts along with corruption then this figure becomes 16.8% and 28.3% for female and male entrepreneurs, respectively, surpassing access to finance as the biggest challenge for firms with male entrepreneurs. Still, their response rate is poorer as compared with their female counterparts.

5.2. Some other Features of the Data

Most of the firms surveyed are in the retail sector (52.5%), followed by manufacturing (30%). For women, this is 50% and 32%, respectively. This shows a slight preference of manufacturing units for the female entrepreneurs; however, a further look into the data shows this may be dominated by the textile industry. 44.5% of the women owners also have a full-time salaried job, while this is only 6.4% for male owners. This might indicate two things. First, the poor performance of the women-owned units, making them an unreliable source of income. Second, the risk-averse attitude of women, which pushes them to seek stable source of income outside, instead of devoting time and effort into their own enterprise. There is also a visible skill bias amongst the male and female owners. 28.2% female owners have a diploma (technical/non-technical) or a bachelors' degree while it is 50.1% for the male owners. A further 35.3% of female owners do not have any education or have an incomplete primary education. This figure is mere 4.5% for the male owners. These are presented in Table 5.

Table 5. Other salient features of the data.

Description	**Male Entrepreneurs (Percentage)**	**Female Entrepreneurs (Percentage)**
Firms in Manufacturing	30	32
Firms in Retail	52.8	50.4
Firms in Services	17.2	17.6
Owners also have a full-time salaried job	6.4	44.5
Owners have a diploma (technical/non-technical) or a bachelors' degree	50.1	28.2
Owners do not have any education or have an incomplete primary education	4.5	35.3

Thus, two points are clear from the descriptive analysis. First, the external environment is not conducive to female entrepreneurship. To state a few reasons, they lack in education and skillset, access to finance, and have the need to seek alternate sources of income.

However, their participation in corruption seems to be more than male entrepreneurs. This makes us wonder if women have found a way around these external constraints through corruption, if is it that they are facing higher bribe demands because of the discriminating tendency of the bureaucrats, or if is it simply because the response rates of women are better and male entrepreneurs are withholding information. The next section presents an econometric analysis to get a better picture of the scenario.

5.3. Empirical Results

As we explained earlier, we implement a probit model to estimate the effect of societal perceptions and corruption on the participation of women in entrepreneurial roles. We begin by controlling those set of variables that should ideally be the only criteria to determine entrepreneurship, namely skill proxied by the highest level of education attained. The marginal effects for this are reported in column 1 of Table 6. We control for firm level characteristics of sales and age in all the specifications. We see that the marginal effects are negative for the two education dummies, implying that the more skilled entrepreneurs in terms of their education are men.

Table 6. Marginal effects of factors affecting female entrepreneurship.

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
Education3	−0.1065 **	−0.0376	−0.0194	−0.0512	−0.0169	−0.0162
	(0.04)	(0.04)	(0.04)	(0.07)	(0.07)	(0.07)
Education2	−0.1201 ***	−0.0593 ##	−0.0550 ##	−0.0735	−0.0800	−0.0745
	(0.04)	(0.04)	(0.04)	(0.07)	(0.06)	(0.06)
Ln sales	0.0001	−0.0014	−0.0061	−0.0122	−0.0098	−0.0117
	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)
Firm age	−0.0028 **	−0.0006	0.0001	0.0009	0.0027	0.0027
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Manager experience		−0.0038 ***	−0.0006	−0.0032	−0.0004	−0.0003
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Owner job		0.1615 ***	0.1041 ***	0.1627 ***	0.1029 **	0.1025 **
		(0.03)	(0.03)	(0.04)	(0.04)	(0.04)
GL2			0.0697		0.1049	0.1127
			(0.06)		(0.14)	(0.14)
GL3			0.1054 ***		−0.0300	−0.0262
			(0.04)		(0.09)	(0.09)
GL4			−0.0801 **		−0.1884 *	−0.1813 *
			(0.04)		(0.10)	(0.10)
Bribe				0.1215 ***	0.0821 **	0.0784 **
				(0.04)	(0.04)	(0.04)
Financially constrained						0.0269
						(0.05)
Observations	935	894	894	295	295	295

Note: Standard errors in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$, ## $p < 0.15$.

In column 2, we introduce manager's experience as another proxy for skill. As expected, this too has a negative value, implying that managers with less experience and skillsets are working for firms with female entrepreneurs. Owner job dummy captures if the owner has a full-time salaried job. The marginal effect for this is positive, confirming our previous result of more women entrepreneurs having an alternate income source. This result holds in all the specifications. A more interesting result here is that once experience is controlled for as a proxy to skill, education ceases to be significant (secondary education dummy is significant at a very low level of 15%).

Things become even more interesting when we introduce the gender-in-language dummies and the bribe variable in columns 3 and 4, respectively. All the variables of

education and experience turns insignificant. We observe from column 3 that compared with a no-gendered language, cities with multi-gendered languages have more female entrepreneurs, while cities with a two-gendered language have lesser female participation in ownership and managerial roles. This confirms hypothesis H1. The results are in line with Gay et al. (2014) In column 4, bribe has a positive marginal effect confirming hypothesis H2. Our results stand in contrast to the results of Jha and Sarangi (2018), who find that women in decision making roles do not affect corruption in a cross-country analysis. Our study has two striking differences from Jha and Sarangi (2018). First, our analysis is at a regional level for India, and second, we look at women in decision making roles as managers and owners of microenterprise units, unlike Jha and Sarangi (2018), who include the entire business sector. Our results on corruption and women, however, support the arguments of Kim et al. (2022) and Wellalage et al. (2019).

In the last column of Table 6, we control for both grammatical gender dummies and bribe. Here, GL3 becomes insignificant, implying that in the presence of bribing as a strategy, the societal attitudes, as reflected through grammatical genders, does not matter for no, one and multi-gendered language spoken areas. However, the more rigid, two-gendered classification of GL4 is still negative, and with a greater value of the marginal effects.

In the descriptive analysis we find that access to finance is the biggest challenge to business operations for the female entrepreneurs. Furthermore, we calculate almost 64 percent of the micro firms to be financially constrained. In column 6 we control for the financially constrained dummy. The marginal effects are not significant. In Table A1, we re-run the specifications of Table 6 for the sub sample of financially constrained firms. The results remain the same. Thus, the financially constrained firms do not behave any differently.

The endogeneity of bribe variables is common in the corruption literature (Triesman 2007). An industry-region average bribe score is the most used instrument to tackle this (Fisman and Svensson 2007; Zhou et al. 2022; Wellalage et al. 2019). A Hausman test for endogeneity reveals no issue of endogeneity of the bribe variables in the current data. This is also validated by the Wald test results of the instrumental variable probit model. A further issue with our current specification is the binary nature of the dependent variable and the endogenous covariate. An instrumental variable probit model would give us inconsistent results in such cases. Thus, we report the results of only the probit model.

In Table 6, we see a drastic fall in the number of observations in the last three columns. This is due to the issue of nonresponses common with experience-based corruption data, used as a self-protection mechanism by firms in politically repressive environments (Jensen et al. 2010). For robustness checks, we re-estimate the models using industry-region average bribe scores, which helps us increase the number of observations for estimation. This is a good approximation if we believe corruption to be a collective action problem (Persson et al. 2013). Also, Basu (2018) argues that every observable firm is corrupt if the industry it enters has normalised corruption. Once the entry choice is made, corruption might be inevitable. However, local government policies on anti-corruption can influence this industry accepted corruption to a large extent. Thus, industry-region average bribe scores can be a good approximation.

The results are reported in Table 7, which largely remain the same. We control only for the GL4 dummy here, keeping GL1, GL2 and GL3 as base, to check if they are performing worse compared to no-gendered language regions only, or even others. This hypothesis is also confirmed. Industry-region average bribe scores are positive and significant just as the firm-level bribe incidence variable. Interestingly, the dummy of financially constrained turns significant, and the marginal effect is positive. Thus, female entrepreneurs are more financially constrained compared with their male counterparts.

Table 7. Marginal effects of factors affecting female entrepreneurship: robustness checks.

	(1)	(2)	(3)
Variables	**Margins**	**Margins**	**Margins**
Education3	0.0259	0.0244	0.0190
	(0.05)	(0.05)	(0.05)
Education2	0.0026	−0.0184	−0.0187
	(0.05)	(0.05)	(0.05)
Ln sales	0.0035	0.0033	−0.0000
	(0.01)	(0.01)	(0.01)
Firm age	0.0012	0.0014	0.0015
	(0.00)	(0.00)	(0.00)
Manager experience	−0.0039 *	−0.0010	−0.0012
	(0.00)	(0.00)	(0.00)
Owner job	0.1407 ***	0.1097 ***	0.1013 ***
	(0.03)	(0.03)	(0.03)
GL4 dummy		−0.1596 ***	−0.1544 ***
		(0.04)	(0.04)
Bribe avIR	0.1579 ***	0.0973 ***	0.0927 ***
	(0.03)	(0.03)	(0.03)
Financially constrained			0.0506 *
			(0.03)
Observations	613	613	613

Note: Standard errors in parentheses: *** $p < 0.01$, and * $p < 0.10$.

6. Conclusions

This paper attempts to look at hindrances to female entrepreneurship for Indian microenterprises. We build two hypotheses: Grammatical gender in languages affects female entrepreneurship by capturing societal attitudes towards women (H1) and bribing positively affects female participation in entrepreneurial activities (H2) and we find evidence for both. We argue that the societal attitudes towards women play a big role in determining the participation of women in top managerial and ownership positions. This is captured using an intuitive approach of grammatical genders in spoken languages of the states these microenterprises belong to. We classify languages into four types: no gender, gender in pronoun only, two-gendered, and multi-gendered. We conclude that states with two-gendered languages had poor participation of women in entrepreneurial roles compared with states with no gender, gender in pronoun only and multi-gendered languages.

This paper argues that women often choose self-employment to avoid labour market discrimination. However, the aided entrepreneurship sectors, such as credit institutions, bureaucrats, and government officials, can discriminate equally. We find that corruption, as captured by bribing, has a positive impact on female entrepreneurship, thus supporting the argument that women use bribery to overcome unfavourable business environments and societal constraints. The results align with Wellalage et al. (2019), who find female-owned firms that bribe to be less credit-constrained, and Kim et al. (2022), who find that women ownership alone does not have a significant impact on bribing decisions in emerging market economies. Small women-owned firms use bribery only when faced with additional constraints of social institutions.

Many studies have shown the greasing effects of corruption, especially when the economic institutions are weak and inefficient. We argue that for women entrepreneurs, discriminatory and derogatory societal attitudes create a similar inefficient ecosystem for them to operate and thrive. In such a situation, corruption becomes an instrument in incentivising and altering decisions in the favour of women owners and managers. Thus, it is not enough to focus on reducing corruption. Doing so at an immature stage, where social and political institutions have not yet developed, might cause more harm than benefit. This study focuses on societal attitudes as a hindrance to female entrepreneurship. It is clear from our results that policy interventions to change the community's behaviour towards women are crucial in anti-corruption policies to be effective in achieving the desired goals.

We should remember that corruption is an alternate route, spread in almost every nook and corner of economic activities. Disenabling this route without developing legitimate routes can damage every section of the economy, especially the micro sector. While India is working on improving its ease of doing business measures, trivial aspects, such as the underlying discriminatory behaviour against women amongst the people at the ground level, if neglected, can hinder us in our path of achieving sustainable development goals.

Two limitations are identified in the current study. First, the results assume that responses to the corruption-related questions are correct. False responses or nonresponses are high in surveys involving sensitive questions on corruption. No amount of precaution or questionnaire-building strategy can guarantee the correctness of the responses. Second, the small sample size of the data and its cross-sectional nature does not allow us to capture the dynamic effects of corruption and societal attitudes regarding gender on female entrepreneurship. Future studies would depend on the availability of better data sources on corruption and the MSME sector of India.

Author Contributions: Conceptualization, D. and S.K.S.; methodology, S.K.S.; software, D.; validation, S.K.S.; formal analysis, D.; investigation, S.K.S.; resources, S.K.S.; data curation, D.; writing—original draft preparation, D.; writing—review and editing, S.K.S.; supervision, S.K.S. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data presented in this study are openly available in The World Bank Enterprise Surveys (WBES) at https://www.enterprisesurveys.org/en/enterprisesurveys.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. Marginal effects of factors affecting female entrepreneurship for financially constrained firms.

VARIABLES	(1)	(2)	(3)	(4)	(5)
Education3	−0.1899 ***	−0.0714	−0.0333	−0.0407	0.0256
	(0.06)	(0.06)	(0.06)	(0.08)	(0.08)
Education2	−0.2223 ***	−0.1100 *	−0.0966 *	−0.0867	−0.1058 ##
	(0.06)	(0.06)	(0.06)	(0.08)	(0.07)
Ln sales	−0.0142	−0.0163	−0.0053	−0.0207	−0.0072
	(0.01)	(0.01)	(0.02)	(0.02)	(0.03)
Firm age	−0.0027 ##	−0.0000	−0.0008	−0.0003	0.0016
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Manager experience		−0.0048 **	−0.0013	−0.0038	−0.0016
		(0.00)	(0.00)	(0.00)	(0.00)
Owner job		0.1853 ***	0.1305 ***	0.1806 ***	0.1134 **
		(0.04)	(0.03)	(0.05)	(0.05)
GL2			−0.0091		0.0570
			(0.09)		(0.21)
GL3			0.0214		−0.1147
			(0.07)		(0.14)
GL4			−0.1683 **		−0.3160 **
			(0.07)		(0.15)
Bribe				0.1327 ***	0.0792 #
				(0.05)	(0.05)
Observations	586	562	562	219	219

Note: Standard errors in parentheses: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$, # $p < 0.12$.## $p < 0.15$.

Notes

[1] For details, see "Contribution of MSMEs to GDP, Ministry of Micro, Small & Medium Enterprises", https://www.pib.gov.in/PressReleasePage.aspx?PRID=1744032, Release ID: 1744032), Posted On: 9 Auguest 2021 2:54 PM by PIB Delhi, accessed on 15 December 2022.

[2] For details, see https://sdgs.un.org/goals/goal5, accessed on 10 December 2022.

[3] For details, see "Khasis: India's indigenous matrilineal society" https://www.bbc.com/travel/article/20210328-why-some-indians-want-more-mens-rights, accessed on 7 December 2021.

[4] Business PAN and GST number are unique documents mandatory for every tax-paying entity (businesses, suppliers, dealers etc.).

[5] For further details, refer to World Bank Implementation Report India, 2022.

[6] To our knowledge, a linguistic database for Indian languages does not exist. We come to the above conclusions on gender-in-language based on two approaches. Firstly, we gather the required information from list of languages by grammatical genders from Wikipedia (https://en.wikipedia.org/wiki/List_of_languages_by_type_of_grammatical_genders, accessed on 1 December 2022), Secondly, we conduct one-to-one interviews with native speakers and confirm the grammatical gender classifications.

References

Alatas, Vivi, Lisa Cameron, Ananish Chaudhuri, Nisvan Erkal, and Lata Gangadharan. 2009. Gender, culture, and corruption: Insights from an experimental analysis. *Southern Economic Journal* 75: 663–80. [CrossRef]

Allison, Lee, Yu Liu, Samuele Murtinu, and Zuobao Wei. 2023. Gender and firm performance around the world: The roles of finance, technology and labor. *Journal of Business Research* 154: 11322. [CrossRef]

Atkinson, Stanley M., Samantha Boyce Baird, and Melissa B. Frye. 2003. Do female mutual fund managers manage differently? *Journal of Financial Research* 26: 1–18. [CrossRef]

Bardasi, Elena, Shwetlena Sabarwal, and Katherine Terrell. 2011. How do female entrepreneurs perform? Evidence from three developing regions. *Small Business Economics* 37: 417–41. [CrossRef]

Bardhan, Pranab. 1997. Corruption and Development: A Review of Issues. *Journal of Economic Literature* 35: 1320–46.

Basu, Kaushik. 2018. Markets and Manipulation: Time for a Paradigm Shift? *Journal of Economic Literature* 56: 185–205. [CrossRef]

Cesaroni, Francesca Maria, Maria Gabriella Pediconi, and Annalisa Sentuti. 2018. It's always a women's problem! Micro-entrepreneurs, work-family balance and economic crisis. *Administrative Sciences* 8: 74. [CrossRef]

Chacko, Elizabeth. 2003. Marriage, development, and the status of women in Kerala, India. *Gender & Development* 11: 52–59. [CrossRef]

Chaudhuri, Kausik, Subhash Sasidharan, and Rajesh Seethamma Natarajan Raj. 2020. Gender, small firm ownership, and credit access: Some insights from India. *Small Business Economics* 54: 1165–81. [CrossRef]

Chiplunkar, Gaurav, and Pinelopi K. Goldberg. 2021. *Aggregate Implications of Barriers to Female Entrepreneurship*. No. w28486. Cambridge: National Bureau of Economic Research.

Das, Maitreyi Bordia. 2006. *Do Traditional Axes of Exclusion Affect Labor Market Outcomes in India?* Social Development Papers, South Asia Series, Paper No. 97. Washington, DC: World Bank.

Davis, Lewis, and Megan Reynolds. 2018. Gendered language and the educational gender gap. *Economics Letters* 168: 46–48. [CrossRef]

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. [CrossRef]

Deshpande, Ashwini, and Smriti Sharma. 2013. Entrepreneurship or survival? Caste and gender of small business in India. *Economic and Political Weekly* 48: 38–49.

Dezso, Cristian L., and David Gaddis Ross. 2012. Does female representation in top management improve firm performance? A panel data investigation. *Strategic Management Journal* 33: 1072–89. [CrossRef]

Dollar, David, Raymond Fisman, and Roberta Gatti. 2001. Are women really the "fairer" sex? Corruption and women in government. *Journal of Economic Behavior & Organization* 46: 423–29. [CrossRef]

Esarey, Justin, and Gina Chirillo. 2013. Fairer sex" or purity myth? Corruption, gender, and institutional context. *Politics & Gender* 9: 361–89. [CrossRef]

Fairlie, Robert W., and Alicia M. Robb. 2009. Gender differences in business performance: Evidence from the Characteristics of Business Owners survey. *Small Business Economics* 33: 375–95. [CrossRef]

Fisman, Raymond, and Jakob Svensson. 2007. Are corruption and taxation really harmful to growth? Firm level evidence. *Journal of Development Studies* 83: 63–75. [CrossRef]

Gay, Victor, Estefania Santacreu-Vasut, and Amir Shoham. 2014. *Language and Gender Economics*. Working Paper. Hanover: Dartmouth.

Hicks, Daniel L., Estefania Santacreu-Vasut, and Amir Shoham. 2015. Does mother tongue make for women's work? Linguistics, household labor, and gender identity. *Journal of Economic Behavior & Organization* 110: 19–44. [CrossRef]

Jain, Ritika. 2022. Gender diversity, gender norms and firm performance: Evidence from India. *Economic Systems* 46: 101006. [CrossRef]

Jensen, Nathan M., Quan Li, and Aminur Rahman. 2010. Understanding corruption and firm responses in cross-national firm-level surveys. *Journal of International Business Studies* 41: 1481–504. [CrossRef]

Jha, Chandan K., and Rafiqul Bhuyan. 2020. Do financial reforms promote entrepreneurship? *Finance Research Letters* 34: 101272. [CrossRef]

Jha, Chandan K., and Bibhudutta Panda. 2017. Individualism and corruption: A cross-country analysis. *Economic Papers: A Journal of Applied Economics and Policy* 36: 60–74. [CrossRef]
Jha, Chandan K., and Sudipta Sarangi. 2018. Women and corruption: What positions must they hold to make a difference? *Journal of Economic Behavior & Organization* 151: 219–33. [CrossRef]
Jianakoplos, Nancy Ammon, and Alexandra Bernasek. 1998. Are women more risk averse? *Economic Inquiry* 36: 620–30. [CrossRef]
Johnson, Johnnie E. V., and Philip L. Powell. 1994. Decision making, risk and gender: Are managers different? *British Journal of Management* 5: 123–38. [CrossRef]
Kapsos, Steven, Andrea Silbermann, and Evangelia Bourmpoula. 2014. *Why is Female Labour Force Participation Declining so Sharply in India?* Geneva: ILO.
Kim, Sahrok, K. Praveen Parboteeah, and John B. Cullen. 2022. Social institutions approach to women's firm ownership and firm bribery activity: A study of small-sized firms in emerging markets. *Journal of Business Research* 144: 1333–49. [CrossRef]
Mahambare, Vidya. 2022. Indian Workforce in the 21st Century Patterns, Heterogeneities and Policy Priorities. Paper presented at International Workshop on The Political Economy of Industrialization in India: A Pro-Labour Perspective, IIT Madras, Chennai, India, April 13.
Mauro, Paolo. 1995. Corruption and Growth. *The Quarterly Journal of Economics* 110: 681–712. [CrossRef]
Méon, Pierre-Guillaume, and Khalid Sekkat. 2005. Does corruption grease or sand the wheels of growth? *Public Choice* 122: 69–97. [CrossRef]
Muravyev, Alexander, Oleksandr Talavera, and Dorothea Schafer. 2009. Entrepreneurs' gender and financial constraints: Evidence from international data. *Journal of Comparative Economics* 37: 270–86. [CrossRef]
Ojediran, Funmi, and Alistair Anderson. 2020. Women's entrepreneurship in the global south: Empowering and emancipating? *Administrative Sciences* 10: 87. [CrossRef]
Persson, Anna, Bo Rothstein, and Jan Teorell. 2013. Why Anticorruption Reforms Fail—Systemic Corruption as a Collective Action Problem. *Governance* 26: 449–71. [CrossRef]
Santacreu-Vasut, Estefania, Amir Shoham, and Victor Gay. 2013. Do female/male distinctions in language matter? Evidence from gender political quotas. *Applied Economics Letters* 20: 495–98. [CrossRef]
Shoham, Amir, and Sang Mook Lee. 2018. The causal impact of grammatical gender marking on gender wage inequality and country income inequality. *Business & Society* 57: 1216–51. [CrossRef]
Swamy, Anand, Stephen Knack, Young Lee, and Omar Azfar. 2002. Gender and corruption. *Journal of Development Economics* 64: 25–55. [CrossRef]
Treisman, Daniel. 2000. The causes of corruption: A cross-national study. *Journal of Public Economics* 76: 399–457. [CrossRef]
Triesman, Daniel. 2007. What Have We Learned About the Causes of Corruption After Ten Years of Cross-National Research. *Annual Review of Political Science* 10: 211–44. [CrossRef]
Vial, Virginie, and Julien Hanoteau. 2010. Corruption, manufacturing plant growth, and the Asian paradox: Indonesian evidence. *World Development* 38: 693–705. [CrossRef]
Wang, Yuanyuan, and Jing You. 2012. Corruption and firm growth: Evidence from China. *China Economic Review* 23: 415–33. [CrossRef]
Wellalage, Nirosha Hewa, Stuart Locke, and Helen Samujh. 2019. Corruption, gender and credit constraints: Evidence from South Asian SMEs. *Journal of Business Ethics* 159: 267–80. [CrossRef]
Zhou, Kevin Zheng, Kui Wang, Dean Xu, and En Xie. 2022. Drinking poison to quench thirst: Does bribery foster firm performance in China? *Journal of Business Research* 147: 505–17. [CrossRef]