CDE
March 2013

ENTREPRENEURSHIP OR SURVIVAL? CASTE AND GENDER OF SMALL BUSINESS IN INDIA

Ashwini Deshpande
Email:ashwini@econdse.org
Department of Economics
Delhi School of Economics

Smriti Sharma
Email:smriti@econdse.org
Department of Economics
Delhi School of Economics

Working Paper No. 228

Centre for Development Economics
Department of Economics, Delhi School of Economics

Entrepreneurship or Survival? Caste and Gender of Small Business in India

Ashwini Deshpande and Smriti Sharma
Delhi School of Economics, University of Delhi.

Abstract

We use unit-level data from the registered manufacturing segment of the Third and Fourth rounds of the Indian Micro, Small and Medium Enterprises (MSME) census data for 2001-2 and 2006-7 respectively, to understand the changes in involvement and dynamics not only of Dalits (officially, Scheduled Castes, or SCs), but also of other marginalized groups, specifically Adivasis (officially, Scheduled Tribes, or STs) and women, in this sector. We empirically estimate the growth rates for these enterprises and analyse the determinants, including caste and gender of the enterprise owner. We find clear and persistent caste and gender disparities in virtually all enterprise characteristics in the registered manufacturing MSME sector. The share of SC-ST ownership has declined over the period, SC-ST enterprises tend to be smaller, more rural than urban, have a greater share of owner-operated (single employee) units. The inter-state variation in share of ST-SC businesses reveals that with the exception of the tribal majority north-eastern states, SC and ST businesses are under-represented as compared to their share in state populations. The sectoral mix varies considerably by rural-urban location as well as by the caste and gender of the owner. The traditional stigmatizing association with leather-work continues to be one of the top five business activities for SCs and not for other caste groups. The gender-caste overlap indicates that the share of female-owned and female-managed enterprises is significantly greater among SC-ST-owned enterprises, than those owned by Others, and especially by Hindu upper-castes.The majority of the MSME workforce is employed in non-SC-ST owned firms. Also, there is evidence of homophily in OBC and upper-caste-owned firms, suggesting that the rise in Dalit entrepreneurship is key to increasing Dalit employment in the small business sector. While it is significant that there is now an emerging section of Dalit entrepreneurs, we find that most Dalit businesses occupy a very different place in the production chain, viz., that they are engaged in the bottom-of-the-ladder, low productivity, survival activities, as can be seen from our estimates of their lower rate of growth, after controlling for other characteristics. Thus, we find that entrepreneurship as a vehicle for social mobility for Dalits is yet to become a reality for India.

Entrepreneurship or Survival? Caste and Gender of Small Business in India

Ashwini Deshpande[1] and Smriti Sharma
Delhi School of Economics, University of Delhi.

1. Introduction

On Republic Day this year, two billionaires, Kalpana Saroj and Milind Kamble, featured among the Padma Awardees, the nation's highest civilian honours. The award was less a celebration of material wealth and more of human triumph over adversity, as these two awardees rose from a life of crushing poverty and marginalization, and against all odds achieved unprecedented success. They are members of the Dalit Indian Chamber of Commerce and Industry (DICCI), founded on April 14, 2005, on the birth anniversary of Dr. B. R. Ambedkar, acknowledged by the DICCI as their "messiah and the intellectual father". Interestingly, while Ambedkar was responsible for making compensatory discrimination for Dalits mandatory through constitutionally guaranteed quotas in government jobs, the DICCI group rejects job reservation as a means to Dalit emancipation, as they feel quotas have added yet another (negative) stereotype to the Dalits, seen as they are as "the State's *Jamais*" (sons-in-law of the State). Instead of depending on the State to provide Dalits decent jobs, the DICCI has adopted as it's mission statement "be job givers, not job seekers", exhorting members of the Dalit community in India to become entrepreneurs[2].

The DICCI's belief that historically marginalized groups can improve their lot through entrepreneurship is not unique. Indeed, individuals from groups facing labour

[1]Deshpande (ashwini@econdse.org) is the corresponding author. We are extremely grateful to B. N. Goldar for his help and suggestions in decoding the MSME data. We would like to thank the Ministry of Micro, Small and Medium Enterprises for providing us with the data. We thank Bhaskar Dutta, Parikshit Ghosh and Thomas E. Weisskopf for comments on an earlier draft, and participants at the research students' colloquium at the Department of Economics, Delhi School of Economics, and at the 7th IZA-World Bank conference on "Employment and Development" for questions and suggestions. Needless to add, we are solely responsible for all remaining errors and omissions.

[2] http://www.dicci.org/about.html, accessed October 31, 2012

market discrimination have a greater incentive to enter self-employment, because they expect lower wages or unfavourable employment in the labour market. Thus, self-employment or entrepreneurship is seen as a route out of poverty and as a desirable alternative to wage employment[3]. This belief implicitly assumes that discriminatory tendencies that characterize labour markets are somehow absent from other markets, such as land or credit, which are critical to the success of entrepreneurial activities. However, research demonstrates that labour market discrimination can "spill over" into markets relevant for self-employment creating seemingly discriminatory outcomes in these markets (Coate and Tennyson, 1992).

Self-employment is also supposed to confer autonomy (what, how, when, and where to produce) and economic independence (scale of operations, partnerships at various levels etc.). However, this implicitly assumes that the self-employed are actually entrepreneurs. In reality, a large part of self-employment in developing countries reflects low-end, low-productivity, survival activity, in that individuals who fail to get a regular job, end up with low-paying self-employment in the informal economy as a last resort, rather than a conscious choice to move away from wage employment and into entrepreneurship.

The DICCI focuses on entrepreneurship, as it believes that "Dalit Capitalism" will help Dalits rise to the top of the social pyramid, and will pave the way for the end of the caste system. The long history of engagement with the question of annihilation of caste is testimony to how vexed this question is, with no easy answers. We believe that in order to understand the spread of "Dalit Capitalism" it is not enough to focus on the top end of Dalit businesses (the Dalit billionaires), but instead, to investigate the extent and spread of Dalit participation in small businesses, which more accurately reflects the material conditions of millions of Dalits who are not in wage employment. In 2004-5, according to the National Sample Survey, in rural India, 34 percent of Scheduled Caste (SC) and 46 percent of Scheduled Tribe (ST) households were in self-employment (with corresponding urban proportions being 29 and 26).

[3]For references to this literature, see Fairlie (2004).

We use unit-level data from the registered manufacturing segment of the Third and Fourth rounds of the Indian Micro, Small and Medium Enterprises (MSME) census data for 2001-2 and 2006-7 respectively, to understand the changes in involvement and dynamics not only of Dalits (officially, Scheduled Castes, or SCs), but also of other marginalized groups, specifically Adivasis (officially, Scheduled Tribes, or STs) and women, in this sector. The Third Census does not have information on the religion of the owner, but the Fourth Census does. This allows us to examine the overlaps between caste and religion and compare the non-SC-ST-OBC (Other Backward Classes) Hindus (the closest approximation to upper castes) with Dalits and Adivasis. In a recent paper, Iyer et al (2013) present a profile of Dalit businesses based on Economic Census data. Our paper confirms several of their findings, but significantly expands the state of knowledge on this subject by, one, examining how the caste mix of employees varies by the caste of the owner, which enables us to assess the extent of homophily (or more appropriately status homophily[4]), i.e. affinity of owners to hire employees from their own caste groups. This helps us gauge if Dalit businesses can indeed be significant job-givers, and for whom. Two, we examine gender differences in ownership and management as well as the gender-caste overlap, to understand how gender mediates disparities both across and within caste groups. Three, we calculate the growth of small businesses in manufacturing and identify its determinants, including the effect of caste and gender of owner.

1.1 Literature on Entrepreneurship and Business Ownership

A stylized fact relevant to business ownership in group-divided societies, e.g. USA, Malaysia or India, is that of wide inter-group disparities in the ownership of businesses. These disparities reflect discrimination in several spheres, viz., pre- (labour) market discrimination that manifests itself in lower education and skill level of marginalized groups, called “less direct” discrimination (Moore, 1983), or discrimination in credit or asset markets, which prevents access to resources needed to start a business.

[4]McPherson et al (2001) discuss the literature on homophily which points out a distinction between *status homophily*, in which the similarity is based on informal, formal or ascribed status, and *value homophily*, which is based on values, attitudes, and beliefs. The former includes the major socio-economic dimensions that stratify society – ascribed characteristics like race, ethnicity, sex, or age, and acquired characteristics like religion, education, occupation, or behavior patterns.

Also, while there are significant rags-to-riches stories in every society, these are more the exception rather than the rule, and entrepreneurial success seems to be positively correlated with a family background in business (Dunn and Holtz-Eakin 2000; La Porta et al 1999), the socio-economic status of parents, of fathers in particular (Nafziger, 1975), and better human and financial capital (Bates, 1997). Disparities in business ownership are an important component of overall wealth disparities between social groups.

While the MSME sector in India has been extensively studied from the perspective of efficiency and viability (Bhavani 1991; Goldar 1985; Goldar 1988; Tendulkar and Bhavani 1997), a comprehensive investigation of this sector from the point of view of the involvement of the marginalized groups is still at a nascent stage. Thorat and Sadana (2009) combine evidence from the published Economic Census and National Sample Survey data to present confirmation of continuing inter-caste disparity in ownership of private enterprises. Iyer et al (2013) use three rounds of the Indian Economic Census micro-data to document various aspects of inter-caste disparities in enterprise ownership. They find that the differences are widespread, but have decreased modestly between 1990-2005. Both these papers find that SCs and STs generally operate smaller enterprises, mainly household businesses assisted by family labour, with a lower capital base and traditional technology. Coad and Tamvada (2012) use the third MSME census to explore determinants of firm growth and various types of barriers faced by small enterprises, but unlike our paper that analyses various aspects related to the participation of marginalized groups, their analysis considers more general factors and focuses solely on growth.

Our main results can be summarized as follows: there are clear caste and gender disparities in ownership of registered manufacturing MSMEs, where SCs and STs are under-represented compared to their population shares, OBCs are roughly equal to their population share and “Others” and Hindu upper castes (non-SC-ST-OBC Hindus) are over-represented. Caste disparities have marginally increased over 2001-2 and 2006-7, whereas gender disparities have marginally decreased. Proportions of SC, ST, OBC and female-ownership are higher in rural compared to urban areas. Based on descriptive

evidence as well as rigorous growth regressions, we find that SC-ST enterprises are more survivalist than entrepreneurial. We find that female-ownership is much higher among SC-ST than among the upper-caste firms. In contrast to other literature on female small business ownership, we find that female-owned and female-managed firms grow faster than their male counterparts, after controlling for other factors. Matching the caste groups of the owners with their employees, we find that proportions of SC-ST employees are highest in SC-ST owned enterprises, and significantly lower in enterprises owned by other caste groups, indicating that a rise in SC-ST ownership might be key to increasing SC-ST employment in the registered manufacturing MSME sector.

2. Small Manufacturing in India: Caste and Gender of Enterprise Owners

The MSME sector in India contributes significantly to manufacturing output, employment and exports. In terms of value, the sector accounts for about 45 percent of the manufacturing output and around 40 percent of total exports. In 2010-11, it employed 73.2 million persons spread over 31.1 million enterprises (MSME, 2012:26-27). It has consistently registered a higher rate of growth than the average for the industrial sector. This sector produces over 6000 products ranging from the traditional to high-tech products, with the largest contributors being food products and beverages producing 14 percent of the total MSME output, wearing apparel with 13.7 percent, and fabricated metal products contributing close to 9 percent.

The Office of the Development Commissioner conducted the Third MSME census in 2002-3 for the reference year 2001-2, and the Fourth Census in 2008-09 for the reference year 2006-07[5],[6]. In the Third census, the enterprises were divided into Small Scale Industrial Undertakings (SSIs) and Small Scale Service and Business (Industry Related) Enterprises (SSSBEs). In the Fourth Census, this classification was changed to the following: enterprises with investment of up to INR 25 lakhs in plant and machinery are classified as micro; enterprises with investment between INR 25lakhs and INR 5

[5]The first census was conducted in 1973-74 and the second in 1990-91.

[6] In 2006, the Micro, Small and Medium Enterprises Development (MSMED) Act was passed, prior to which this sector was known as the Small Scale industries sector.

crore are classified as small; and enterprises with investment between INR 5 crore and INR 10 crore are classified as medium.

The permanently registered units were covered on a complete enumeration basis (census), whereas a sample survey was conducted for the unregistered MSMEs[7]. In the registered sector, approximately 23 and 22.4 lakh units were covered in the Third and Fourth censuses respectively. Of these, 14 lakh in the Third Census and 15 lakh in the Fourth census (about 63 percent) were found to be working, and the rest were closed. By registration, we mean MSMEs that are registered with the District Industry Centers (DIC) of the respective state governments. The registration scheme is voluntary and free of cost[8].This paper focuses on manufacturing enterprises in the registered sector for several reasons: one, because the bulk of the registered enterprises (67 percent in the fourth census) are in manufacturing[9]; two, manufacturing is critical for generating wage employment; three, large parts of modern manufacturing are non-traditional activities, therefore, an analysis of changes in the caste-occupation overlap in this sector provides a good index of the changing economic role of caste in the private sector.

2.1 Caste and gender of enterprise owners

As Table 1 shows, the average age of a registered manufacturing enterprise in the MSME sector is 13 years. 45 percent of units are rural. We see clear and sharp disparities in ownership by caste, in that OBCs and Others together own over 90 percent of the units, with the rest owned by SCs and STs. Comparing these figures to population shares, the OBC share in enterprise ownership is roughly equal to their share in the population (41.2 percent), whereas SCs and STs (at 19.7 percent and 8.4 percent of the national population) are significantly under-represented. The under-representation of these two

[7]Unregistered sector survey was done using a two-stage sampling design, with the first stage being the village/urban block and the second stage being the establishment. The Economic Census was used as the base frame for sampling.

[8]Registration with the DIC gives the enterprise access to benefits such as easier access to institutional credit, preferential rates of interest, various exemptions and subsidies and marketing assistance etc. Sharma (2013) finds that being registered with the DIC yields significant gains for firms in terms of sales per employee and value added per employee.

[9]According to the Fourth Census, the unregistered MSME sector comprises of approximately 24.5 million enterprises, of which 52 percent are rural. 73.8 percent of units are service-based.

groups is mirrored in the over-representation of "Others"and Hindu upper castes (non-SC-ST-OBC Hindus) which comprised 30.7 and 21.6 percent of the population respectively in 2004-05[10].

Over the two censuses, we find an increase in caste disparity in ownership of manufacturing enterprises: decline in proportions owned by SCs and STs (at 6 and 3 percent respectively in 2006-7)[11], and a corresponding increase in proportions owned by OBCs and Others (at 40 and 50 percent respectively). This is contrast to the overall trend reported in Iyer et al who find a modest increase in proportions of SC-ST enterprise ownership over 1990-2005 for all non-agricultural enterprises (Iyer et al, 2013, p.53). We find that one, proportions owned by SCs, STs and OBCs are substantially higher in rural areas compared to urban. Two, the decline in SC-owned units is higher in rural than urban areas, whereas ST-owned units show a greater decline in urban than in rural areas. Three, the overall (small) rise in OBC-owned units is mainly due to a rise in rural areas, and the rise in Others' proportion is evenly spread across rural and urban areas.

Gender disparities in ownership are sharper, but show a reduction over the two rounds. Female-ownership (enterprises where 51 percent of share capital belongs to a woman) increased from 11.32 percent in 2001-2 to 14.7 percent in 2006-7, whereas female-managed units increased from 9.56 to 11.54 percent. Note that all female-managed enterprises are not female-owned: in 2006-7, 88 percent of female-managed enterprises were female-owned, but only 69 percent of female-owned firms were female-managed.As Table 1 shows, both female-management and female-ownership is higher in rural than in urban areas. This might seem paradoxical at first glance, but it is useful to recall that labour force participation rates (LFPRs) for women also exhibit the same pattern in that rural LFPRs for women are higher than urban. This raises larger questions about what factors contribute to female empowerment but that discussion would have to await another paper.

[10]Authors' calculations based on 61st Round NSS Employment-Unemployment Survey, 2004-5, unit-level data.

[11]These are not very different from the proportions in the unregistered sector: SCs and STs own 7.89 and 3.18 percent respectively, while OBCs and Others own 40.31 and 43.48 percent respectively.

The overwhelming majority of enterprises in the registered MSME sector are micro, rather than small or medium, but again with clear caste and gender disparities. For instance, 8.35 percent of Hindu upper-caste owned firms are small, whereas the proportions among the other caste groups are under 2 percent.

2.2 State-wise distribution

Tamil Nadu has the single largest percentage of registered manufacturing MSMEs (around 16 percent in 2006-7). As Table 2 shows, the five states which together account for over 56 percent of the total MSMEs have remained the same over the two censuses, but the relative ranking of some of the states has changed. It is interesting that three of the four southern states appear in the top five across both rounds.

SC-ST ownership is marked by considerable regional and inter-state variation, and with the exception of ST ownership in some north-eastern states (such as Arunachal Pradesh or Meghalaya), both these groups are substantially under-represented in enterprise ownership relative to their shares in the respective state populations. The highest proportion of SC-owned enterprises is in Himachal Pradesh, followed by Uttarakhand, Karnataka, Tripura, Madhya Pradesh, and Punjab. ST ownership is high predominantly in the tribal majority north-eastern states (Mizoram, Meghalaya, Nagaland, Arunachal Pradesh). The only state in the Indian mainland with high ST ownership is Chhattisgarh, which has the highest proportion of tribal population outside of the north-east.

States with the highest proportions of OBC ownership are Tamil Nadu, Bihar, Kerala, Karnataka and Madhya Pradesh. It is interesting that there is no overlap between states which have high Others' ownership and those which have high SC-ST ownership, highlighting the somewhat obvious fact that caste disparities in enterprise ownership are systematically related to broader inter-caste disparities at the state level, rather than a result of random factors.

The north-eastern states, along with Kerala, lead in terms of both female ownership as well as female management, reflecting the egalitarian tradition which owes in part to the matrilineal history of these regions. The fact that a state such as Tamil Nadu that does not share this history appears in the top five states for female-ownership (albeit in the fifth position) in 2006-7 could be an indicator of change, but it is too early to say.

3. How is production differentiated by caste and gender?

3.1 Distribution of activities across castes

Tables 3a, b and c show the changing distribution of activities (based on NIC 2-digit(2004) classification) over the two census rounds for all enterprises, differentiated by rural-urban as well as by caste and gender of the owner/manager. The top five activities, which collectively account for roughly 62 percent of all registered manufacturing MSMEs, are food products and beverages, apparel, fabricated metal products, furniture and textiles. Looking at the rural-urban division of activities, we see that food products and beverages are far more important in rural areas, compared to urban. The share of this sector has gone up over the period; the increase being much sharper for rural enterprises, where they account for a quarter of all MSMEs in 2006-7.

This overall picture changes somewhat when we differentiate by caste of the owner. We can see that activities dealing with leather – tanning and dressing of leather, manufacture of luggage and footwear – stigmatizing jobs traditionally associated with one of the Dalit castes, are the most important activity for SC manufacturing and these do not appear in the top five activities of any other caste group. However, over the period, the proportion of SC-owned enterprises engaged in leather has shown a decline. Also, leather forms a larger share of urban SC-owned units, compared to rural.

The stigma of untouchability has traditionally kept Dalits out of food-related industries (Navsarjan 2010; Shah et al 2006). We find that the proportion of SC-owned

firms in food products and beverages is significantly lower than the national average, and that of all other caste groups. However, over the period, this proportion has increased, both in rural and urban areas, and again, proportions are smaller in urban areas compared to rural. To the extent that Dalit participation in leather and exclusion from food are indicators of traditional caste practices, we find some evidence of loosening of these ties, but find that these practices more strongly entrenched in urban compared to rural areas, which is an enigma.

Another instance of traditional practices can be seen in the case of rural ST enterprises, 10 percent of which are engaged in the making of wood and straw products. It is noteworthy that for urban STs, this proportion is 5 percent in 2006-7, and this activity is not in the list of the top five activities for urban STs. However, the share of wood and straw products has marginally gone down over the two censuses.

The OBC picture is very similar to the all-India picture; given the high share of OBC-owned enterprises, this is probably driving the all-India picture. Roughly 7-8 percent of Hindu upper caste units are engaged in the production of machinery and equipment, a category of production that distinguishes them from the other caste groups. Rural upper castes are also engaged in the production of non-metallic mineral products.

3.2 Distribution of activities by gender

The differences in activities by gender of owner-manager are starker than the caste differences. In 2006-7, 59.92 percent of female-managed firms and 48 percent of female-owned firms were engaged in manufacture of wearing apparel. These proportions are an increase over shares in 2001-2, which were 53.61 and 44.84 respectively. Some other dominant activities for female firms (managed and/or owned) are food products and beverages (roughly 13 percent compared to roughly 19 percent for men) and textiles. On the other hand, furniture and fabricated metal products are much more important for male firms. These differences confirm findings from other literature. Das (2003) deals specifically with non-farm household enterprises in India and finds that women continue

to operate trades traditionally considered the domain of women. Experimental evidence also suggests that women are more likely to be risk-averse than men (Eckel and Grossman 2008;Niederle and Vesterlund 2007), but we cannot say if this explains the gender differences in propensities to be engaged with certain activities or if business objectives tend to be different for men and women.

4. Employment

As Table 4 shows, 45 percent of employees in the registered manufacturing MSME sector are in rural areas in 2006-7, an increase from 39 percent in 2001-2. Thus, production patterns in this sector would play a vital part in shaping patterns of rural non-farm employment, underscoring the critical importance of this sector in the Indian economy. We see that the typical enterprise had 6.4 employees in 2006-7, with a higher average in urban enterprises[12]. The MSME census does not specifically ask what proportion of employees are family labour versus hired wage employees, but it would be reasonable to infer that the probability of use of family labour would be higher, the lower the number of average employees. Economic Census data allow the identification of family labour, and Iyer et al (2013, p.56) find that in 2005, 51 percent of two-person and 26 percent of three-person firms consist of only family labour, with the proportions of family labour being higher for SC/ST firms (77 percent) as compared to non-SC/ST firms (68 percent). They also find greater differences among castes in the propensity to hire family labour in urban than in rural areas.

The average number of employees is also an indication of the scale of the enterprise. We can see that this number has gone up for all manufacturing enterprises regardless of the caste and gender of the owner[13], but shows differences by caste and gender of owner/manager. SC, ST and OBC-owned enterprises tend to be smaller than

[12]The average employment in the unregistered sector is 2.05. 95 percent of units are proprietary. 74 percent of enterprises use no power and only 11.5 percent use electricity.

[13] This is in contrast to the trend for all enterprises where average firm size has been going down over 1990-2005 (Iyer et al, 2013, p.56).

Others-owned, with the Hindu upper caste enterprises employing the highest average number of employees (8.59) in 2006-7.

Research on female entrepreneurs in developing countries shows that female-led enterprises are typically smaller, and experience slower growth than male enterprises (McPherson 1996; Mead and Liedholm 1998). We find differences in size: female-owned and female-managed enterprises tend to be significantly smaller in terms of average number of employees (4.64 and 3.14 respectively) compared to male-owned and male-managed enterprises (6.71 and 6.83 respectively): but our results on growth are different, as we will see in Section 6.

4.1 Owner-operated enterprises: survival activities?

Whether a self-employed individual is an entrepreneur, or simply involved in survival activities is a matter of inference based on attributes of the business. Owner-operated units, which by definition have one employee, can be reasonably seen as representing survival activities, possibly distress-driven. From Table 5, we see that the proportion of such units has increased over the period to stand at 22.6 percent in 2006-7. Not surprisingly, the proportion of such units in rural areas is greater, but the increase in urban proportions has been sharper compared to rural.

Proportion of owner-operated manufacturing enterprises is highest among SCs – 40 percent in 2006-7, an increase from 38 percent in 2001-2, indicating that a large part of Dalit manufacturing is small-scale and survival-driven. Note that these proportions for all non-agricultural enterprises are much higher, with 65 percent of SC enterprises and 56 percent of non-SC-ST enterprises being single-employee enterprises (Iyer et al, 2013, p. 56). Proportion of owner-operated units in ST and OBC-owned businesses are significantly lower than that among SCs. However, the biggest contrast is between these three groups and the “Others”, whose proportions of owner-operated enterprises have remained practically unchanged over the period, whereas the other three groups have registered significant increases. The proportion of owner-operated enterprises among the

Hindu upper-castes at 11.5 percent is the lowest among all caste groups, indicating that these businesses are more entrepreneurial than survival-driven.

The proportions of female-owned and female-managed owner-operated enterprises are much higher and have increased much more compared to their male counterparts and therefore, this forms a significant component of gender disparities in ownership and management of manufacturing enterprises.

4.2 Homophily

What about the caste break-up of the employees? Over the period, the proportion of employees who are SC, ST and OBC have gone down, with a corresponding increase in the proportion of Others[14]. The employee share of SC, ST and OBCs is greater in rural enterprises than in urban, with the share of "Others" being exactly the opposite. The gender break-up reveals that manufacturing MSME employees are overwhelmingly male, with less than one-fifth of the employees being female; female proportions being higher in rural than urban areas, with the rural-urban gap having narrowed over the period.

Looking at the distribution of employees by caste of owner, from Table 6, we see that between 2001-2 and 2006-7, the share of SC-employees in SC-owned enterprises has *declined* from 85 to 61 percent (for STs, the corresponding figures in ST-owned enterprises are 70 to 60 percent). There is a similar decline for percentage of OBC employees in OBC-owned firms, but an *increase* in "Other" employees in Others'-owned firms. In 2006-7, in OBC and Others'-owned enterprises, between 74 and 77 percent of employees belong to the owner's caste group.

It could be argued that these numbers simply reflect the use of family labour and not homophily. While we cannot distinguish between the two with exact certainty, we can provide pointers. In 2006-7, the median number of employees in the manufacturing

[14]MSME census does not ask for the religion of employees, so we cannot identify the Hindu upper castes among the employees.

MSME sector was 3. We find that 50.52 percent of micro units, 0.57 percent of small units and 0.6 percent of medium units had less than 3 employees. Conversely, of all units with less than 3 employees, 99.94 percent were micro units, 0.05 small, and none were medium. Adding this to the fact that smaller enterprises are more likely to use family labour, we can look at employee shares separately for units above and below the median number of employees. For firms with more than 3 employees (presumably with greater use of hired labour), 65 percent of employees in OBC firms are OBCs and 70 percent of employees in Others' firms are Others (similar to upper caste firms), whereas only 39 and 49.7 percent of employees in SC and ST firms are SC and ST respectively. Thus, the majority of employees in the larger SC-ST firms are *not* SC-ST. This outcome could potentially be explained by the skill differential between SC-ST and Other employees, but data do not allow us to separate employer preferences that are due to caste affinity from those that are due to the potential skill of the employees. Also, it should be noted that what we observe are outcomes as a result of the hiring process. Whether these outcomes are due to homophily or simply reflect the relative availability of employees from different caste groups is difficult for us to ascertain, since labour demand and supply cannot be separated.

We started this paper with the DICCI mission statement: "be job givers and not job seekers". Empirically, how does the ability of Dalit enterprises to create jobs compare with that of other caste groups? At the national level, of the total workforce in registered manufacturing MSMEs, only 4 percent is employed in SC-owned firms, 2.2 percent in ST-owned firms, 27.7 percent in OBC-owned firms, and 66 percent in firms owned by Others (of which, 41.5 percent is employed in Hindu upper-caste owned firms). Notice that over time, the share of OBC and Other employees in SC-ST owned enterprises has risen significantly, whereas the share of SC-ST employees in OBC and Others-owned enterprises has shrunk. Both due to the smaller size of SC-ST firms, and to the fact that OBCs and "Others" practice homophily, evidence suggests that the beneficiaries of jobs created in the registered manufacturing sector will be disproportionately OBCs and Others. Thus, the potential of Dalit businesses to create jobs for Dalits seems to be limited based on the evidence so far. However, as Table 6 indicates, in firms above the

median number of employees, the highest proportion of SC and ST employees is in firms owned by SCs and STs respectively, and is significantly greater than the corresponding proportions in firms owned by other caste groups. Thus, the likelihood of SC and ST employees getting hired is far greater in SC/ST-owned firms, indicating that the rise in Dalit/Adivasi entrepreneurship is critical to improving employment outcomes for members of these groups.

5. The Gender-Caste Overlap

Literature on the overlap of caste and gender finds that SC and ST women are doubly disadvantaged on account of their gender and their lower-caste status. However, historically there has been a trade-off inherent in the gender-caste overlap in that, while Dalits and Adivasi women have been subject to greater material deprivation and oppression, they have experienced more egalitarian gender relations within the family, as well as fewer taboos on public mobility. Upper-caste women, on the other hand, have enjoyed relative material prosperity in comparison, but have been subject to greater immurement and constraints on public visibility, with the taboos being sharper, the higher the caste in the hierarchy (Deshpande 2007; Liddle and Joshi 1986). Using this data set, we are able to examine how gender mediates disparities both within and across broad caste groups. The preceding sections have outlined how gender disparities in ownership and management manifest themselves in virtually all enterprise characteristics. The overlap of caste and gender reveals how gender disparities are shaped by the caste of the owner.

Table 7 reveals that overall, the proportion of women-owned and women-managed enterprises has gone up over the period. However, reflecting the historical egalitarian tradition, female ownership among lower castes is both higher and has increased much more than among Others (by 5 to 6 percentage points among SCs, STs) compared to less than 2 percentage points among Others. Thus, in 2006-7, more than twice as many SC and ST firms were woman-owned compared to Hindu upper castes. The same picture obtains for women managers, where the gap between upper caste and

SC-ST-owned units increases to over three times. Female management and ownership for OBCs is in between SC-STs on the one hand, and upper castes on the other, but is closer to SC-STs. STs have the highest rates of female management and ownership. We see similar gaps in proportions of female employees, but here the gaps between social groups are smaller, possibly due to the gendered nature of some operations, i.e., some activities are traditionally done by women and regardless of the caste and gender of the owner, women would be employed for such activities.

6. What Determines Growth of Manufacturing MSMEs?

In this section we present the estimation of determinants of growth of registered manufacturing MSMEs based on the fourth census data. Growth in logarithmic form is defined as:

$$\text{Growth}=\ln(X_{i,t})-\ln(X_{i,t-2}) \qquad \text{where } i=1,2,\ldots n \qquad (1)$$

Where X stands for gross output. The year *t* corresponds to 2006-07 and year *t-2* corresponds to 2004-05. Since we have data on output for three consecutive years, we calculate the growth rate over two years in order to smooth out any year-to-year fluctuations in the data.

In data of this size, outliers are inevitable, either on account of data entry or measurement errors. Using a standard cleaning procedure, firms that have output-capital or output-labour ratios that are more than three standard deviations away from the mean are excluded from the analysis. After cleaning the data, we ran a median regression (LAD) on the remaining observations using the following equation:

$$\text{Growth}= \alpha+\beta_1\ (\text{size})+ \beta_2\ (\text{age})+ \beta_3\ (\text{urban})+ \beta_4\ (\text{owner-operated})+ \beta_5\ (\text{proprietary})+ \beta_6\ (\text{knowhow})+\beta_7\ (\text{energy source dummies})+\beta_8\ (\text{owner caste dummies})+ \beta_9\ (\text{female owner})+ \beta_{10}\ (\text{female manager})+ \beta_{11}\ (\text{district dummies})+ \beta_{12}\ (\text{industry 3-digit dummies})+\varepsilon \qquad (2)$$

The exact definitions of the variables used in this regression are in Appendix A, and the summary statistics are in Table 8. We account for industry specific and district-specific factors by including industry 3-digit and district level dummy variables. District-level dummy variables capture district-specific variables that might influence performance of firms—such as infrastructure, product markets, quality of available labour etc.—which we are not able to control for with the available data. Standard errors are clustered at the district level. Calculations based on Table 8 indicate that the average annual growth rate is 21.4 percent. Only 12.5 percent firms have access to any technical know-how and 90 percent are proprietary. 23 percent enterprises use no power and 67 percent use electricity.

The results of the growth regression can be seen in Table 9, which shows that output in period 2004-5 (which measures size) and age have a negative impact on growth, i.e. smaller and younger firms grow faster. Firms with technical knowhow grow faster than those without. Firms using any power source (mainly electricity, but also LPG, coal, oil or even traditional sources, such as firewood or non-conventional energy) grow faster than those firms not using any power. Owner-operated enterprises grow slower than those with more than one employee. Firms in urban areas register higher growth rates than those in rural areas. All these results are in the expected direction and standard in the literature.

6.1 How is growth related to the caste of owner?

Our regressions reveal that the caste of the owner has a significant impact on growth of the enterprise. Thus, in comparison to Others-owned firms, SC, ST and OBC-owned firms register significantly lower growth, after controlling for size. Coad and Tamvada (2012) summarize the literature that distinguishes between firms based on their growth performance. The intuition is that high-productivity entrepreneurial firms will grow fast, while firms that are in low-productivity survival activities will register lower growth. Based on these indicators and other evidence on the informality and low-productivity nature of SC-ST economic activity (NCEUS, 2008), we can say with greater certainty that SC and ST-owned businesses are more likely to be survivalist than

entrepreneurial.

This data set does not have information on personal characteristics, assets and networks of owners. Evidence from other data sets indicates that SC-STs individuals are on average poorer, with lower education, fewer assets and poorer networks[15]. However, in this exercise, we are not able to isolate the effects of these characteristics, (which in turn could reflect pre-market discrimination), and decompose the difference in growth rates into "explained" and "discriminatory" components or directly test for discrimination in credit or land markets.

There exists other evidence that Dalit firms face discriminatory barriers to expanding their businesses and this could be a possible mechanism to explain our findings. In a case study of Dalit businesses in north-west India, Jodhka (2010) finds that most Dalit businesses are small in size, run mostly as self-proprietorships in the informal sector (these would be classified as own-account enterprises in our data set). Some Dalits in his study felt that they had been victims of prejudice. Locally dominant communities, who have traditionally dominated the business scene, do not like Dalits getting into business: "they hate us" or they "do not like us being in the business" were some of the common responses from Jodhka's Dalit businessman respondents. Some other reported being regarded as outsiders or "odd actors". Many felt handicapped because of not being part of traditional business communities. A large proportion of his Dalit respondents felt that caste affected their business negatively, both because of discrimination from traditional business communities, but also from consumers. "Identification with my caste name tends to discourage my clients. Even when they do not have caste prejudice, they feel we may not be able to deliver because we are traditionally not the ones who have been in business or possess enough resources to run a good business"(Jodhka 2010:47). This is similar to evidence from other countries, e.g. Borjas and Bronars (1989) find evidence that the large observed differences in self-employment rates across racial groups (Asians, blacks, Hispanics, and whites) in the US is partly due to consumer discrimination.

[15]Deshpande (2011) summarizes this evidence.

6.2 Effect of female ownership and management on growth

In contrast to the international literature which documents lower growth rates for female enterprises because of conservative social attitudes towards women in traditionally male-dominated arenas, and/or because female entrepreneurs are expected to be less ambitious in terms of growth targets and more concerned with earning just enough to provide for their families, our regressions reveal that female-owned and female-managed enterprises have significantly higher growth than male-managed, after controlling for other characteristics[16].

The strong positive effect of female ownership and management on growth is noteworthy. This can be explained by self-selection since our study is based on only the registered sector. Registration is voluntary and it is the more enterprising and motivated owners/managers that are more likely to take the initiative to register their firms. Therefore, it is possible, on average, that the women owners and managers in registered firms represent a group with much higher innate abilities than male managers in registered firms. Bardasi et al (2011) also cite self-selection as a possible reason for their finding that in eastern Europe, central Asia and sub-Saharan Africa, gender gaps in firm growth are much smaller. Also, while large proportions of Indian women have either no or low education, in the segment of the population with higher education, women outperform men, suggesting that those who are able to cross early hurdles have the abilities necessary for success (Khanna, 2012).

7. Concluding Comments

We find clear and persistent caste and gender disparities in virtually all enterprise characteristics in the registered manufacturing MSME sector over 2001-2 and 2006-7. The share of SC-ST ownership has declined over the period, SC-ST enterprises tend to be smaller, more rural than urban, have a greater share of owner-operated (single employee) units. The inter-state variation in share of ST-SC businesses reveals that with the

[16]See Coad and Tamvada (2012:386) for a review of this literature.

exception of the tribal majority north-eastern states, SC and ST businesses are under-represented as compared to their share in state populations. The sectoral mix varies considerably by rural-urban location as well as by the caste and gender of the owner. The traditional stigmatizing association with leather-work continues to be one of the top five business activities for SCs and not for other caste groups; however, we see a decline in this share for SC-owned enterprises.

For OBC-owned firms, the evidence is mixed. The proportion of OBC ownership reflects their population share. Also, the top five states in terms of ownership are those where OBCs are also the dominant group in politics, suggesting that small business ownership has been one of the factors contributing to their political dominance. But there are clear disparities between OBCs and Others.

The gender-caste overlap indicates that the share of female-owned and female-managed enterprises is significantly greater among SC-ST-owned enterprises, than those owned by Others, and especially by Hindu upper-castes, suggesting that the effects of the historical taboos on upper-caste women, which were absent for lower-caste women, on entry into public arenas of economic production continue to linger, even as the formal taboos have loosened.

The majority of the MSME workforce is employed in non-SC-ST owned firms. Also, there is evidence of homophily in OBC and upper-caste-owned firms. Thus, the MSME sector, as it stands today, is not a major vehicle for job creation for the Dalits. While it is significant that there is now an emerging section of Dalit entrepreneurs who could be job-givers, we should note that most Dalit businesses occupy a very different place in the production chain, viz., that they are engaged in the bottom-of-the-ladder, low productivity, survival activities, as can be seen from their lower rate of growth, after controlling for other characteristics.

In India, certain castes and communities have traditionally been business communities, and entrepreneurs from these communities start with clear natural advantages in that they possess insider knowledge, know-how and strong business

networks passed down through the generations (Damodaran, 2008). In this context, an important channel of social mobility would be the extent to which marginalized groups, whose traditional occupations have not been business-based, have been able to break into established networks and establish themselves as entrepreneurs. While this data set does not have detailed and specific jati information, the evidence suggests that entrepreneurship as a significant vehicle for social mobility for Dalits is yet to become a reality for India.

In a recent op-ed piece, Chandra Bhan Prasad and Milind Kamble[17] (2013) argue that "capital is the surest means to fight caste. In Dalits' hands, capital becomes an anti-caste weapon…Dalit capitalism is the answer to that regime of discrimination". We believe that the best site to test the validity of this proposition is the private manufacturing sector. Our analysis of changes in the private manufacturing sector in the era of market-led and globalized development finds that caste continues to shape virtually all aspects of production, and capital, so far, is not countering the deep-rooted inequities produced by caste.

The Indian state is often berated for *creating* casteism through reservations, the implicit argument being that outcomes are *not* mediated by caste when the state doesn't intervene to change the caste-mix of institutions. Until April 2012**,** there was no systematic policy of compensatory discrimination in the sphere of small business activity, so the outcomes we report in this paper could not possibly be caused by state intervention. On the contrary, this picture clearly indicates the need for concerted policy to correct historical caste-based inequalities. The "supplier diversity" initiative of the Madhya Pradesh government in 2002 was one such beginning, but the focus there was on government procurement from SC-ST *suppliers*. The "Public Procurement Policy for MSEs" of 2012 mandates that central government ministries, departments and public sector undertakings should procure minimum of 20 percent of their annual value of goods or services from MSEs and *within this*, 20 percent should be earmarked for SC-ST-owned MSEs, i.e. total 4 percent of the 20 percent. Lest we think of this as too radical, note that

[17]One of the Padma Awardees.

the Malaysian affirmative action programme directly seeks to redress wealth disparities between Malays and the Chinese by reserving 30 percent of all business ownership to ethnic Malays. The policy of the Indian government is considerably weaker. While we debate the efficiency and efficacy of this policy, we have to be mindful that altering the no-intervention status quo in the private sector would not introduce disparities, but correct them.

References:

Bardasi, Elena, Shwetlana Sabarwal and Katherine Terrell (2011):"How do female entrepreneurs perform? Evidence from three developing regions",*Small Business Economics*, 37(4): 417-441

Bates, Timothy (1997) *Race, Self Employment and Upward Mobility: an Illusive American Dream* (Johns Hopkins University Press, Baltimore).

Bhavani T.A. (1991):"Technical Efficiency in Indian Modern Small Scale Sector: An application of Frontier Production Function",*Indian Economic Review*, 26(2):149-166

Bhavani, T. A and Suresh Tendulkar (1997):"Policy on Modern Small Scale Industries: A Case of Government Failure", Indian Economic Review, 32(1): 39-64

Borjas, George and Stephen Bronars (1989): "Consumer Discrimination and Self-Employment", *Journal of Political Economy*, 97: 581–605.

Coad, A and Tamvada, JP. (2012):"Firm growth and barriers to growth among small firms in India",*Small Business Economics*, 39(2): 383-400.

Coate, Stephen and Sharon Tennyson (1992):"Labor Market Discrimination, Imperfect Information and Self-Employment", *Oxford Economic Papers*, New Series, 44(2): 272-288

Damodaran, Harish (2008). *India's New Capitalists: Caste, Business and Industry in a Modern Nation*. (Palgrave Macmillan)

Das, Maitreyi Bordia (2003): "The Other Side of Self-Employment: Household Enterprises in India", World Bank Social Protection Discussion Paper No. 318, Washington DC: World Bank.

Deshpande, Ashwini (2007): "Overlapping identities under liberalization: gender and caste in India", Economic Development and Cultural Change, 55(4): 735-760

Deshpande, Ashwini (2011). *The Grammar of Caste: Economic Discrimination in Contemporary India*, (Oxford University Press, New Delhi)

Dunn, Thomas and Douglas Holtz-Eakin (2000):“Financial Capital, Human Capital, and the Transition to Self-Employment: Evidence from Intergenerational Links”, *Journal of Labor Economics*, 18(2): 282- 305.

Eckel, Catherine and Philip Grossman (2008): “Men, women and risk aversion: Experimental Evidence”,*Handbook of Experimental Economics Results*. 1:1061- 73

Fairlie, Robert W. (2004): “Does Business Ownership Provide a Source of Upward Mobility for Blacks and Hispanics?” in Douglas Holtz-Eakin and Harvey S. Rosen(ed) *Public Policy and the Economics of Entrepreneurship* (MIT Press)

Goldar B. N. (1985): “Unit Size and Economic Efficiency: A Study of Small Scale Washing Soap Industry in India”,*Artha Vijnana*,7 (1): 21-40

Goldar B. N., “Relative Efficiency of Small Scale Industries in India” in K. B. Suri (ed.) Small Scale Enterprises in Industrial Development: The Indian Experience (New Delhi : Sage Publications, 1988).

Iyer, Lakshmi, Tarun Khanna and Ashutosh Varshney (2013: “Caste and Entrepreneurship in India”,*Economic and Political Weekly*, XLVIII(6): 52-60

Jodhka, Surinder (2010):**“**Dalits in Business: Self-Employed Scheduled Castes in Northwest India”, Indian Institute of Dalit Studies Working Paper, 4(2)

Khanna, Shantanu (2012): “Gender wage discrimination in India: Glass Ceiling or Sticky Floor”, CDE Working Paper No. 214, Delhi School of Economics.

La Porta, Rafael, Florencio Lopez-de-Silanes and Andrei Shleifer (1999): “Corporate Ownership Around the World”,*Journal of Finance*, 54: 471-518.

Liddle, J. , & Joshi, R. (1986). *Daughters of independence: Gender, caste and class in India.* (United Kingdom. London: Zed Books Ltd, Rutgers University Press)

Mead, D. C. and Liedholm, C. (1998): “The dynamics of micro and small enterprises in developing countries”,*World Development*, 26: 61–74

McPherson, M. A. (1996): “Growth of micro and small enterprises in Southern Africa”,*Journal of Development Economics*, 48: 253–277

McPherson, Miller, Lynn Smith-Lovin and James M. Cook (2001): “Birds of a Feather: Homophily and Social Networks”,*Annual Review of Sociology*. 27: 415-444

Ministry of Micro, Small and Medium Enterprises (2012). *Annual Report 2011-12*. (Government of India).

Moore, Robert L. (1983): “Employer Discrimination: Evidence from Self-Employed Workers”, *Review of Economics and Statistics*, 65(3): 496-501

Nafziger, E. Wayne (1975): “Class, Caste and Community of South Asian Industrialists: An Examination of the Horatio-Alger Model”,*Journal of Development Studies*, 11: 131-148

Navsarjan Trust (2010). Understanding Untouchability: A Comprehensive Study of Practices and Conditions in 1589 Villages.

National Commission for Enterprises in the Unorganized Sector (2008). The Challenge of Employment in India: An Informal Economy Perspective. (Government of India).

Niederle, Muriel and Lise Vesterlund (2007); “Do Women Shy away from Competition? Do Men Compete too Much?”,*Quarterly Journal of Economics*, 122 (3): 1067-1101.

Prasad, Chandra Bhan and Milind Kamble (2013): “Manifesto to End Caste: Push Capitalism and Industrialization to Eradicate this Pernicious System”, Times of India, 23 January (://articles.timesofindia.indiatimes.com/2013-01-23/edit-page/36485155_1_dalit-youth-upper-castes-caste-system)

Shah, Ghanshyam, Harsh Mander, Sukhadeo Thorat, Satish Deshpande and Amita Baviskar (2006). *Untouchability in Rural India* (Sage Publications: New Delhi)

Sharma, Smriti (2013): “Benefits of a Registration Policy for Microenterprise Performance in India”, *Small Business Economics*, forthcoming.

Thorat, Sukhadeo and Nidhi Sadana (2009): “Caste and Ownership of Private Enterprises”, *Economic and Political Weekly*, XLIV (23): 13-16

Appendix A: Variable definitions

Gross output is the sum of gross sales value; work done for others on material supplied by them; receipts for non-industrial services rendered to others; increase in stock of semi-finished goods; value of electricity generated and sold; value of own construction; net balance of goods sold in the same condition as purchased; less distributive expenses.

Age measures the number of years the firm has been operating.

Knowhow: equals 1 if firm has obtained technical knowhow from any source (domestic or foreign); 0 otherwise

Proprietary: equals 1 if the firm is a sole proprietorship; 0 otherwise

Energy sources binary variables for each type: LPG, coal, electricity, oil, non-conventional, traditional and other sources. Omitted category is no power used.

Owner operated enterprise: equals 1 if the firm has only one employee; 0 otherwise

Table 1: Descriptive Statistics for the Registered Manufacturing MSME sector

Variable	Third Census 2001-2	Fourth Census 2006-7
Average age (years)	13.15	13
Rural Enterprises (%)	45.92	45
Average number of employees	4.42	6.42
Proportion of enterprises owned by		
SCs	7.7	6.3
STs	3.5	2.94
OBCs	40.05	40.46
Others	48.75	50.29
of which, Hindu Upper Castes	n.a.	41.51
Proportion of Rural enterprises owned by		
SCs	10.84	8.51
STs	4.53	4.16
OBCs	45.43	46.52
Others	39.19	40.8
of which, Hindu Upper Castes	n.a.	31.05
Proportion of Urban enterprises owned by		
SCs	5.03	4.42
STs	2.62	1.9
OBCs	35.48	35.29
Others	56.87	58.39
of which, Hindu Upper Castes	n.a.	50.23
Proportion of enterprises that are		
Female-managed	9.56	11.54
Female-owned	11.32	14.7
Proportion of Rural enterprises that are		
Female-managed	11.75	13.72
Female-owned	13.21	16.91
Proportion of Urban enterprises that are		
Female-managed	7.69	8.99
Female-owned	9.72	12.86
Proportion of All enterprises that are		
Micro	n.a.	95.22
Small	n.a.	4.6
Medium	n.a.	0.17
Proportion of micro firms owned by		
SCs	n.a.	98.34
STs	n.a.	98.03

OBCs	n.a.	98.23
Others	n.a.	92.25
of which, Hindu Upper Castes	n.a.	91.34
Women	n.a.	98.37
Proportion of small firms owned by		
SCs	n.a.	1.53
STs	n.a.	1.78
OBCs	n.a.	1.72
Others	n.a.	7.48
of which, Hindu Upper Castes	n.a.	8.35
Women	n.a.	1.58
Proportion of medium firms owned by		
SCs	n.a.	0.13
STs	n.a.	0.19
OBCs	n.a.	0.05
Others	n.a.	0.27
of which, Hindu Upper Castes	n.a.	0.3
Women	n.a.	0.05

Note: Enterprises with investment in plant and machinery up to INR 25 lakhs are classified as 'micro', those with investment between INR 25 lakhs and INR 5 crore are 'small' and those with investment between INR 5 crore and INR 10 crore are 'medium'.

Table 2: Top 5 States

	Third Census 2001-2	**Fourth Census 2006-7**
Number of enterprises	TN, UP, Ker, Guj, Karn	TN, Guj, UP, Karn, Ker
SC-owned	HP, UK, Pun, Har, MP	HP, UK, Karn, Trip, MP
ST-owned	Miz, Meg, Naga, Arunachal, Chhatisg	Miz, Meg, Naga, Arunachal, Chhatisg
OBC-owned	TN, Bih, Ker, Karn, MP	TN,Bih,Ker,MP, Karn
Others-owned	Delhi, Chandigarh, WB, Maha, Assam	Delhi, Chandigarh, Guj, WB, Maha
of which, Hindu UC	n.a.	Delhi, Guj, Maha, WB, Chandigarh, Mani
Female-owned	Megh, Arunachal, Miz, Sik,Ker, Manipur	Megh, Miz, Mani, Ker, TN
Female-managed	Megh, Miz, Arunachal, Ker, Mani, Sikkim	Megh, Miz, TN, Ker, Assam

Table 3a: Sectoral Division, All-India

	Third Census 2001-2	Fourth Census 2006-7
ALL		
Food products & Beverages	18.02	17.77
Apparel	13.97	15.63
Fabricated Metal products	13.93	11.6
Furniture	9.14	8.06
Textiles	5.9	8.95
SC-owned		
Apparel	18.84	25.38
Leather, luggage and footwear	27.4	16.24
Food products & Beverages	8.32	10.76
Textiles	7.39	7.27
Furniture	8.07	7.07
ST-owned		
Apparel	21.19	21.53
Food products & Beverages	14.34	18.28
Furniture	11.36	11.79
Textiles	12.74	8.5
Wood & straw products, except furniture	9.29	8.33
OBC-owned		
Apparel	17.36	22.7
Food products & Beverages	19.03	18.11
Fabricated Metal products	14.37	11.14
Furniture	11.76	9.52
Textiles	5.9	7.45
Hindu UC		
Food products & Beverages	n.a.	17.8
Fabricated Metal products	n.a.	11.92
Apparel	n.a.	10.56
Textiles	n.a.	10.33
Machinery & Equipment	n.a.	6.9
Female-owned		
Apparel	44.84	48.02
Food products & Beverages	14.4	13.26
Textiles	8.07	10.41
Fabricated Metal products	5.03	4.34
Chemicals & Chemical Products	3.93	4.18
Male-owned		

Food products & Beverages	18.49	18.68
Fabricated Metal products	15.06	12.3
Apparel	10.03	12
Furniture	9.81	8.72
Textiles	5.63	8.19
Female-managed		
Apparel	53.61	59.92
Food products & Beverages	13.4	12.32
Textiles	7.95	8.43
Chemicals & Chemical Products	3.3	3.11
Furniture	3.3	2.84
Male-managed		
Food products & Beverages	18.51	18.61
Fabricated Metal products	15.05	12.3
Apparel	9.78	11.75
Furniture	9.76	8.61
Textiles	5.69	8.53

Note: each cell reports the percentage of units in that sector.

Table 3b: Sectoral Division, Rural India

	Third Census 2001-2	Fourth Census 2006-7
ALL		
Food products & Beverages	20.49	24.93
Apparel	13.61	18.97
Furniture	8.19	8.68
Fabricated Metal products	8.37	8.41
Textiles	4.35	7
SC-owned		
Apparel	21	27.25
Leather, luggage and footwear	24.54	14.17
Food products & Beverages	9.72	12.87
Textiles AND Furniture	9.13 & 8.57	7.93 & 7.6
Wood & straw products, except furniture	7.82	7.15
ST-owned		
Apparel	26.54	23.04
Food products & Beverages	18.67	22.12
Furniture	12.32	12.4
Wood & straw products, except furniture	12.29	10.1
Textiles	8.08	8.12
OBC-owned		
Food products & Beverages	24.15	22.54
Apparel	18.18	21.23
Furniture	13.18	10.7
Fabricated Metal products	11.41	9.16
Wood & straw products, except furniture	8.3	7.73
Hindu UC		
Food products & Beverages	n.a.	31.37
Apparel	n.a.	13.03
Fabricated Metal products	n.a.	8.66
Non-metallic mineral products	n.a.	7.67
Furniture	n.a.	6.1
Female-owned		
Apparel	50.57	50.25
Food products & Beverages	16.15	16.36
Textiles	8.72	10.35
Non-metallic mineral products	4.87	4.1

Chemicals & Chemical Products	3.53	3.88
Male-owned		
Food products & Beverages	26.24	27.12
Apparel	11.57	12.51
Furniture	11.23	9.71
Fabricated Metal products	11.48	9.54
Non-metallic mineral products	8.21	6.74
Female-managed		
Apparel	57.44	59.92
Food products & Beverages	14.14	14.34
Textiles	8.97	8.82
Chemicals & Chemical Products	3.14	3.24
Non-metallic mineral products	3.45	2.89
Male-managed		
Food products & Beverages	26.34	27.08
Apparel	11.3	12.23
Furniture	11.16	9.62
Fabricated Metal products	11.44	9.44
Non-metallic mineral products	8.34	6.85

Note: each cell reports the percentage of units in that sector.

Table 3c: Sectoral Division, Urban India

	Third Census	Fourth Census
	2001-2	**2006-7**
ALL		
Apparel	8.95	15.69
Fabricated Metal products	13.05	13.56
Food products & Beverages	9.78	11.4
Textiles	5.13	9.83
Furniture	6.36	7.35
SC-owned		
Apparel	14.89	22.35
Leather, luggage and footwear	32.61	19.59
Fabricated Metal products	10.34	9.27
Food products & Beverages	5.76	7.32
Textiles AND Furniture	4.20 & 7.17	6.21 & 6.21
ST-owned		
Apparel	13.35	18.77
Fabricated Metal products	15.38	13.69
Food products & Beverages	7.99	11.25
Furniture	9.95	10.65
Textiles	19.58	9.2
OBC-owned		
Apparel	16.48	24.34
Fabricated Metal products	17.54	13.35
Food products & Beverages	13.46	13.17
Furniture	10.22	8.2
Textiles	6.61	7.15
Hindu UC		
Fabricated Metal products	n.a.	13.6
Textiles	n.a.	12.63
Food products & Beverages	n.a.	10.63
Apparel	n.a.	9.29
Machinery & Equipment	n.a.	8.27
Female-owned		
Apparel	38.23	45.52
Textiles	7.32	10.48
Food products & Beverages	12.37	9.8
Fabricated Metal products	7.76	6.72
Chemicals & Chemical Products	4.39	4.52
Male-owned		

Fabricated Metal products	17.99	14.55
Food products & Beverages	12.16	11.81
Apparel	8.76	11.59
Textiles	6.43	9.8
Furniture	8.66	7.91
Female-managed		
Apparel	48.64	59.91
Food products & Beverages	12.45	9.78
Textiles	6.64	7.95
Fabricated Metal products	5.23	3.3
Furniture	4.04	3.21
Male-managed		
Fabricated Metal products	17.98	14.62
Food products & Beverages	12.16	11.74
Apparel	8.54	11.35
Textiles	6.5	10.09
Furniture	8.62	7.79

Note: each cell reports the percentage of units in that sector.

Table 4: Employment in registered manufacturing MSMEs

	Third Census 2001-2	Fourth Census 2006-7
Proportion of employees in rural areas	39	45
Average number of employees	4.5	6.42
Average number of employees in urban enterprises	4.98	7.23
Average number of employees in rural enterprises	3.75	5.44
Average number of employees in		
SC-owned enterprises	2.64	4.31
ST-owned enterprises	3.44	4.7
OBC-owned enterprises	3.67	4.44
Others-owned enterprises	5.37	8.52
Hindu UC-owned enterprises	n.a.	8.59
Female-owned	3.8	4.64
Male-owned	4.6	6.71
Female-managed	3.03	3.14
Male-managed	4.56	6.83
Proportion of employees who are		
SC	12	9
SC in rural ents (in urban)	14.6 (10.4)	10.7 (7.5)
ST	5.5	3.4
ST in rural ents (in urban)	5.95 (5.22)	4.51 (2.47)
OBC	44	41.7
OBC in rural ents (in urban)	47.8 (41.08)	47.1 (37.1)
Others	38	46
Others in rural ents (in urban)	31.54 (43.2)	37.7 (52.9)
Female	13.04	18.94
Females in rural ents (in urban)	15.73 (11)	19.16 (18.85)
% of total MSME workforce in		
SC-owned ents	4.5	4.2
ST-owned ents	2.7	2.2
OBC-owned ents	32.9	27.7
Others-owned ents	59.9	66
Hindu UC-owned ents	n.a.	41.5

Table 5: Owner Operated Enterprises (Single Employee)

	Third Census 2001-2	Fourth Census 2006-7
% Registered MSMEs	19.2	22.6
% Rural MSMEs	27.42	30.3
% Urban MSMEs	12.28	16.03
% SC-owned	38.14	40.4
% ST-owned	28.26	30.6
% OBC-owned	22.5	31
% Others-owned	13.33	13
of which, Hindu UC owned	n.a.	11.52
% Female-owned	33.61	41.04
% Female-managed	39.3	49.57
% Male-owned	17.62	19.4
% Male-managed	17.33	19.07

Table 6: Caste Composition of Registered Manufacturing Employees by Caste of Owner

Fourth Census				
	% SC emp	**% ST emp**	**% OBC emp**	**% Others emp**
SC-owned	**60.78**	1.76	14.24	23.22
ST-owned	6.16	**59.85**	11.86	22.12
OBC-owned	4.84	0.98	**77.37**	16.79
Others-owned	5.98	2.27	18.17	**73.57**
Upper-caste owned	6.12	2.43	17.78	**73.65**
Third Census				
SC-owned	**85.07**	2.53	6.37	6.02
ST-owned	7.41	**70.41**	13.25	8.91
OBC-owned	5.13	2.09	**86.1**	6.65
Others-owned	7.21	4.22	17.97	**70.58**

For firms below median number of employees, Fourth Census 2006-7

	% SC emp	**% ST emp**	**% OBC emp**	**% Others emp**
SC-owned	**70.63**	0.9	11.2	17.26
ST-owned	5.26	**67.22**	11.34	16.16
OBC-owned	2.07	0.34	**84.79**	12.78
Others-owned	2.64	0.72	16.44	**80.19**
Upper-caste owned	2.87	0.82	16.85	**79.44**

For firms above median number of employees, Fourth Census 2006-7

	% SC emp	**% ST emp**	**% OBC emp**	**% Others emp**
SC-owned	**38.82**	3.66	21.01	36.49
ST-owned	7.37	**49.78**	12.56	30.27
OBC-owned	9.29	2.02	**65.45**	23.24
Others-owned	7.71	3.07	19.06	**70.14**
Upper-caste owned	7.6	3.16	18.2	**71.02**

Table 7: Gender-Caste Overlap

	Women Managers (%)		Women Owners (%)		Women Employees (%)	
	2001-2	2006-7	2001-2	2006-7	2001-2	2006-7
SC-owned	15.43	19.95	16.47	21.54	18	23.1
ST-owned	17.1	21.26	16.95	23.28	18.3	23.25
OBC-owned	10.36	14.72	11.88	17.32	14.6	19.7
Others-owned	7.43	7.35	9.64	11.28	10.5	17.6
of which, Hindu UC-owned	n.a	6.29	n.a.	10.31	n.a.	18.71

Table 8: Summary statistics for growth regression

Variable	N	Mean	SD	Min	Max
Growth	1108264	0.18	0.4	-17.1	19.17
Ln (Output 2006-7)	1188692	12.57	1.76	0	23.07
Ln (Output 2005-6)	1143807	12.48	1.76	0	23.02
Ln (Output 2004-5)	1108539	12.39	1.75	0	23.02
Age	1154703	13.27	9.13	1	106
Urban	1190171	0.54	0.49	0	1
Tech. know-how	1190171	0.125	0.33	0	1
Proprietary owner	1190171	0.902	0.29	0	1
Owner operated	1190171	0.226	0.42	0	1
Energy sources:					
LPG	1190171	0.004	0.06	0	1
Coal	1190171	0.018	0.13	0	1
Electricity	1190171	0.67	0.47	0	1
Non-conventional	1190171	0.001	0.04	0	1
Oil	1190171	0.038	0.19	0	1
Traditional	1190171	0.017	0.13	0	1
Other	1190171	0.015	0.12	0	1
No power used	1190171	0.229	0.42	0	1
Owner & Manager:					
SC-owned	1190171	0.06	0.24	0	1
ST-owned	1190171	0.03	0.17	0	1
OBC-owned	1190171	0.41	0.49	0	1
Others owned	1190171	0.5	0.49	0	1
Female-owned	1190171	0.147	0.35	0	1
Female-managed	1190171	0.115	0.32	0	1

Note: Variable definitions are in Appendix A.

Table 9: Growth regression

Variable	Median
Ln (Output 2004-05)	-0.011***
	(0.0001)
Ln (Age)	-0.004***
	(0.0001)
Urban	0.001***
	(0.0002)
Know-how	0.004***
	(0.0003)
Proprietary	-0.019***
	(0.0004)
Owner operated	-0.01***
	(0.0003)
SC-owned	-0.008***
	(0.0004)
ST-owned	-0.002**
	(0.0007)
OBC-owned	-0.008***
	(0.0002)
Female-owned	0.001***
	(0.0005)
Female-managed	0.004***
	(0.0005)
Energy: LPG	0.008***
	(0.0015)
Energy: Coal	0.006***
	(0.0008)
Energy: Electricity	0.006***
	(0.0003)
Energy: Non-conventional	0.002
	(0.002)
Energy: Oil	0.001*
	(0.0006)
Energy: Other	0.002**
	(0.0008)
Energy: Traditional	-0.003***
	(0.0008)
Constant	0.217***
	(0.004)
N	1074271
R^2	0.215

Note: ***, **, * indicate significance at 1%, 5% and 10% respectively. NIC 3-digit and district dummies included. Standard errors clustered at district level in parentheses.