

Caste, Courts and Business*

Tanika Chakraborty[†]

Anirban Mukherjee[‡]

Sarani Saha[§]

Divya Shukla[¶]

Abstract

The growth of business, especially small and medium scale enterprises (SME) are critical for employment generation in less developed countries. This study seeks to identify the role of the institutions of contract writing in business formation. Specifically, this paper focuses on the impact of judiciary in facilitating new small and medium entrepreneurs, especially those from disadvantaged sections of the society, to enter the market and start a business. The main findings suggest that improvement in the functioning of judiciary helps to flourish businesses. Moreover, the effect is found to be stronger for socially disadvantaged groups such as women and SC/ST.

Keywords: Court, Formal institutions, Entrepreneurship, Caste, Gender

JEL Codes: K12,L26,O17

*We are grateful to IDRC, Canada, for supporting our research.

[†]Indian Institute of Management, Calcutta. Email:tanika@iimcal.ac.in

[‡]University of Calcutta. Email:ameco@caluniv.ac.in

[§]Indian Institute of Technology, Kanpur. Email:sarani@iitk.ac.in

[¶]Indian Institute of Technology, Kanpur. Email:divyashukla14@gmail.com

1 Introduction

A business, seen from a theoretical perspective, is nothing but a set of contracts. Efficient institutions of contract enforcement therefore are critical for proliferation of business. In this paper we aim to see how court efficiency affects business performance in India. More specifically, we are empirically estimating this relationship between efficiency of formal institutions and various indicators of business performance by utilizing a district-wise panel data set for eleven states in India. Even though, we would expect court efficiency to affect business outcomes positively, in a country like India, which is characterized by slow and costly court procedure, this question is far from trivial. Conventional wisdom, that is supported by our interviews with entrepreneurs, suggest that in the event of breach of contract, they usually do not approach court and try to resolve the issue using informal mechanisms such as business or social networks.

A cursory look at the condition of the Indian judiciary points to a host of inefficiencies including court congestion, legal costs and delays and, in general, a lack of reforms. In January 2013 there were around 30 million cases pending in different courts in India. At present on an average it takes around 15 years for a civil case to get resolved. If the situation does not improve there will be an estimated 150 million pending cases by 2040 (Times of India, January 17, 2013). Such an inefficient court system cast a negative spell on the business environment. India, ranking 132 out of 185 countries in terms of ease of business, puts up a very strong barrier to entry for the new firms (Doing Business Report, 2013, p 3). The barrier is even more binding for small and medium enterprises that play a very important role in employment generation. Hence the need of the day is perhaps the presence of high quality formal contracting institutions which will resolve disputes, enforce contracts and hence aid the growth of entrepreneurship.

In the literature however, different views come up. According to the 2005 World Bank Enterprise Surveys, about 12.5 per cent of firms in the survey have reported to be going to courts for resolving various issues over the period 2001-2004. Furthermore, about “ 22.5 per cent of firms cite poor contract enforcement as a constraint to doing business”.Ahsan [2013]. Most of the papers that uses cross country data also have found positive relationship between institutional quality and economic development and growth [Acemoglu et al., 2001, 2002, Rajan and Zingales, 1998]. However, these papers mostly look at the effect of property right institutions. One exception is Acemoglu and Johnson [2003] who distinguish between the effects of property rights

institutions and contracting institutions on growth. Using a cross country data set they find that while good property right institutions have positive effect on growth, the effect of contracting institutions is not robust. This could be because in several less developed countries, in absence of any effective formal institution, network and reputation based contract enforcement may help running business. This result is consistent with our general expectation and several anecdotal evidence.

There has been much less research though on this more specific question regarding relevance of institutions in affecting business decisions. Chemin [2012] finds that reforms in civil court procedure leads to lower breach of contract, higher access to capital and building of new capacity in India. Another closely related paper is Klappper et al. [2006]. Their study, based on 34 Eastern and Western European countries, find that higher requirements to comply with formal bureaucratic regulation, prevents new businesses from entering the industry by increasing entry cost.

In this paper we exploit the variation in court efficiency across districts in India as well as over time to estimate our relationship. One of the highlights of the paper is to create an objective measure of court efficiency by utilising a novel dataset on functioning of district courts across 12 states in India. The dataset, collected from different high courts across India, provides access to statistics such as number of cases instituted in an year, number of cases solved as well as number of cases pending in an year for all the districts of these states for a varying timespan. This dataset has been merged with All India Census of Micro Small and Medium Enterprises MSME, to get the information on entrepreneurship. Our empirical methodology is to regress various measures of business performance on efficiency of the judiciary. For robustness, we use alternative measures of court efficiency. The main findings of the paper suggest that businesses perform better if the efficiency of judiciary is higher. More specifically, we find that firms take a longer time to get registered and are less likely to be registered in districts where court efficiency is weaker. Also, the registered firms employ less when court efficiency is lower.

The contribution of our paper is two fold. First, we use a novel data set from courts that allows us for the first time to construct a district level court efficiency index. Second, we examine how court efficiency affects entrepreneurs from different social backgrounds differently. We find that lower caste and women entrepreneurs gain more from better formal courts than their higher caste and male entrepreneurs respectively. This could be because of differential access to informal dispute resolution mechanism for socially disadvantaged groups. We conjecture that in absence of formal courts,

people approach different community level bodies for dispute resolution which are dominated by upper caste male members of the society. Hence, if formal court improves, everyone gains, but lower caste and female entrepreneurs gain more. This result has some serious policy implications as improving court efficiency can help the disadvantaged section more than the privileged section.

The rest of the paper is organized as follows. Section 2 summarizes the data used to test the implications of our model. Section 3 outlines the empirical framework, followed by section 4 which reports the empirical findings. Finally section 5 concludes.

2 Data

2.1 Court Performance Data

Our study is based on a novel data set that represents administrative data collected from as many as 18 High courts all across India. We are collecting data and are hoping to add a few more states to the list. We represent our data coverage in Table 1. However, we use data from eleven states for which our data coverage coincides with the data coverage of enterprise data from Fourth All India Census 2006-07. To the best of our knowledge, this is the only database which given district level data on pendency, disposition and instituted for several number of years. The data on district courts that can be obtained from public domain such as National Crime Record Bureau represents district court data aggregated at the state level.

In this data we have year wise information regarding the number of **civil** cases pending at the beginning of the year, number of civil cases instituted during an year, and the number of civil cases disposed during an year for several year and districts. Table 2 gives a summary of these variables. Using this information we construct some form of court inefficiency measure. However, we do not know the nature of the cases. So we do not know whether the cases involved land dispute or breach of contracts.

In our analysis, we regress several measures involving business registration and firm size on court inefficiency measures. We argue that a firm established in a district with congested court will less incentive to register any business. For our purpose, it does not matter whether a court is congested by business disputes or land disputes.

As long as, the time taken to dispose a case is high, it will signal the entrepreneurs that court battle is prohibitively costly and therefore the value of formal registration is less.

Our main measure of court quality comes from Chemin [2009].

Duration- According to Chemin 2009, assuming court does not accept any more cases in following years, then, the ratio of number of cases pending (plus the number of cases filed within the year) and number of cases solved during a year yields the number of years that judiciary would take to address the backlog of cases.

$$\delta_t = \frac{p_t + f_t}{d_t}$$

where p_t is the number of cases pending at the beginning of the year t , f_t is the number of cases filed in year t and d_t is the number of cases disposed within year t .¹

Figure 1 helps analyse the trend over time as well gives an idea over the cross-section view of duration as an inefficiency index. We essentially plot the difference of national average of duration index and duration index of a state at any instant. This facilitates in comparing the performance of any state from the overall performance. Thus, positive points would indicate more efficient points. In other words, a state is performing better than the nation when inefficiency is lower than the national average. Thus, we see that all the states in the southern region have been performing consistently better than the national average in most of the years. Moreover, states in the Southern region have more stability in terms of case-flow management techniques when compared to states in the northern-region. Though, Andhra Pradesh and Tamil Nadu have a more stable case-flow management than Kerala, Puducherry or Telangana. On the other hand, overtime there is high variability noted in the performance of states in the northern region. The high income states perform visibly better than the low income states. Figure 2 gives a vivid account for district level inefficiency index, duration for the years 2001. The performance trend follows from Figure 1. In other words, we note higher instances of judicial inefficiency in the northern region when compared to southern region. In addition to this, we observe prevalence of east-west dichotomy of court quality within the state.

¹For robustness check, we use disposition time and expected delay as a measure of judicial inefficiency

To elaborate, we spot that districts located along the western part of any state in general would take lesser number of years to clear the caseload when compared to the districts located along the eastern region.

It is also stated that a judiciary should clear more cases than it receives in a particular year, so as to ensure that it doesn't create a backlog problem. However, there can be two districts which clear at the same rate, where one district is solving a higher proportion of old cases while the other one is solving a higher proportion of new cases. We emphasize the district which focusses on solving higher number of newer cases would witness higher business growth. With this aim, we have constructed proportionate old cases solved as a measure of inefficiency index. We briefly describe the steps involved in the construction of the new index. Let

f_{5t} be the total no. of cases filed in last five years as of year t

s_{5t} be the total no. of cases solved in last five years as of year t

a_{15} be the no. of cases pending for period 1-5 years. Then,

$n = f_{5t} - a_{15}$ will be the no. of cases solved in last five years, which were also instituted in this period. And

$o = s_{5t} - n$ will be the no. of cases solved in last five years which were more than five years old. Thus, proportionate old cases solved will be measured as

$$\frac{o}{s_{5t}} \tag{1}$$

However, the coverage of the new index allows us to be applied only for the years 2005-2007. Figure 3 plots the difference of national average and proportionate old cases solved 2005 onwards. The trend is mostly in consent with the trend observed in Figure 1, where we had plotted the duration index. The new measure becomes more comprehensive as it takes account of the performance of variables over a period of five years unlike any other index.

2.2 MSME Data

We use Fourth All India Census for registered Enterprises, 2006-07 for our study. There are around 158525 enterprises, whose year of establishment ranges from 2000-2007 Database has information on year of registration, year of production, location of the enterprise and total employees. It also includes information on the social identity of the owner of the enterprise such as caste, gender, and religion. We used MSME data to construct delay in registration as the time gap between an enterprise

starting production and getting registered that is measured in number of years. Also, we see whether a firm gets registered in the same year as it starts production or later through a binary variable. Total number of people employed has been used as a proxy for firm size. And lastly, binary variable registration status of a firm; are considered as the dependent variables which are used to understand the industry performance. We summarize these variables in Table 6

In Table 3 we present the summary statistics of ethnic (caste and religion) and gender identity. We further break the entire sample for rural and urban areas and present in Tables 4 and 5. We find that in rural India as well as urban, almost two thirds of the owners are male. We also see that most of the business are dominated by Hindus. In rural India, 86% of the firm owners are Hindu while in urban India 88% are Hindu. However, when we look at the caste categories, the business ownership are dominated by Other Backward Castes (OBC). In both rural and urban areas, around 50% are owned by members of OBC. Members of general caste groups own around 38% of business in rural areas and 37% of that in urban areas. Members of scheduled caste and tribe own around 11% of business in rural areas and around 7% in urban areas. Next, we split the the whole sample to urban and rural India to find any possible difference of efficiency measures between industrial units in urban area that with in urban area. First, in Table 7 we present the rural data while in Table 8 we present the same for urban areas.

3 Empirical Method

In the empirical section we regress the industry performance measures on several measures of court (in)efficiency. Our primary measure of court inefficiency is duration rate which is indicated by ineff1 and our primary of firm performance if the number of days of delays in registration. In this analysis we use one round of MSME data from the year 2007-08 which is a cross section data. We matched this data with court quality data which we have for several years.

However, the nature of our study allows us to construct a panel data set. Primarily we are interested in delays in registration which is captured by the difference between the year of the establishment and the year of registration. For different firms , these two years are different even if the delay may be the same. For example, compare two firms from the same districts. One is established in 2000 and registered in 2002

while the other is established in 2002 and registered in 2004. In both cases the delay is of 2 years. But in the first case the delay in registration is regressed on the court quality in year 2000 and in the second case it is regressed on the court quality in the year 2002.

For delay in registration measure our model takes the following form:

$$\delta_{idt} = (y_{id(t+n)} - y_{idt}) = \alpha + \beta_1 X_{dt} + Z_{idt} \beta_2 + \beta_4 D_d + u_i \quad (2)$$

where, $y_{id(t+n)}$ is the year of registration and y_{idt} is the year of establishment for firm i , district d and year t . α is the constant. X_{dt} is the court quality index for district d at time t , Z_i are firm specific control such as manager and owner's gender, religion and caste identities which are time invariant. Note that, negative impact of inefficiency on delay in registration could be driven by higher court quality of some districts. We include D_d as district fixed effects for the same reason. Lastly, u_{idt} is the error term. Finally, we cluster the error using district-year group.

Then we use alternative measures of firm efficiency such as same year registration status which is a binary that takes 0 if a firm gets registered after it has started production and 1 if a firm gets registered in the same year as it starts production.

We also look at the effect of court efficiency on the size of the firm represented by total employment. In this case however, the analysis is purely cross sectional as we regress the current number of employee in 2007 on the court quality in 2007. The analysis takes the following form

$$n_{id} = \alpha + \beta_1 X_d + Z_i \beta_2 + u_{id} \quad (3)$$

As part of the robustness check we also use different measures of court efficiency as mentioned above.

4 Results

4.1 Baseline

In what follows we conduct regression analysis to test the extent to which the efficiency of formal legal institutions enhance growth and performance of small and medium enterprises. We use data on legal cases from various district level courts of twelve states for which we have court efficiency data. Using these, we first construct various measures of efficiency, based on the information on the number of legal cases

pending and the number of cases disposed, that we have already discussed . We then combine them with information on various measures that indicate the ease of enforcing contracts in a business using a survey on medium and small scale enterprises.

We first look at the relation between legal efficiency and the extent of delay in registering a business. We measure delay in registration as the number of years it takes a firm to register from the year it started production. Our baseline regression presented in Table 9 where delay in registration is regressed on duration rate and other control variable. In column 1, we only use ineff1 as the independent variable without any control and find that court inefficiency has a positive impact on delay in registration meaning that if the enterprises are from the districts with high duration rate, they are more likely to delay their registration. We interpret the delay in registration as an indicator of their low, perceived pay-offs from registering with the formal authorities which we argue that comes from low trust on the formal institutions. Such low trust on formal institutions comes from weak performance of courts in that district. From column 2 onwards we keep on adding several control variables to see if the coefficient of the independent variables change. We find that the coefficient of interest remained positive and significant.

In column 2, we added rural dummy and we find that in urban areas enterprises delay more in registering their firms – a result that holds for other specifications too. From column 3, we start adding variables regarding ethnic and gender identity of the entrepreneur. The main coefficient of interest remains the same across specifications. In column 3 we control for the caste of the entrepreneur. It is possible that districts that have more efficient judiciary encourage higher participation of socially disadvantaged groups in entrepreneurship. However, if socially disadvantaged groups are less efficient than the other entrepreneurs then they might take a longer time to get their firms registered. For instance registration might be a costly procedure both in terms of information acquisition as well as pure monetary costs. Entrepreneurs who are at a disadvantage might take more time to afford the high costs as well as gather the right information. Controlling for social background increases the magnitude of the effect of a weaker judiciary on the extent of delay in registration.

For a similar argument, we control for the religion of the owner in column 4. However, the inclusion of the religion indicator does not affect the correlation between legal inefficiency and business inefficiency beyond the ones captured by caste. In column 5 we control for the gender of the owner. Since labor force participation of men

in general is much higher than that of women in India, it is possible that gender of firm owner affects the efficiency of the firm itself which is captured in registration delay. On the other hand, gender of the owner might also be linked with the efficiency of judiciary in a district. For instance formal institutions, courts in this case, might facilitate business operations more for women entrepreneurs, who are less likely to get the benefits from informal networks dominated by men. For a similar reason we control for the gender of the manager of a firm in column 6. We find that the magnitude of the coefficient of interest increases further with a control for the gender of the manager and owner.

4.2 Various measure of business-efficiency

Overall, the results in Table 9 suggests that a more efficient judiciary helps businesses to operate in the formal sector, possibly by reducing the cost of formalization. To test this further, in Table 10 we explore whether a more efficient legal system incentivizes more firms to operate in the formal sector as opposed to the informal sector. Since formal courts help enforce contracts, it is easier for firms to write formal contracts when legal system is more efficient, effectively reducing the cost of formalization. For comparison, Table 10 reports the results on delay in registration from the full specification. Column 2 further looks at the probability of getting registered in the same year as the start of production. The coefficient in column 2 suggests that court efficiency does not significantly affect firms' probability to be registered in the same year they start operation even though sign of the coefficient is in the expected direction.

In addition to the threshold of registration, an important decision for an enterprise is the scale of operation. Since larger organizations are more likely to face contract enforcement problems, a more efficient legal system is likely to help in the expansion of business. Note however, that the dependence of a firm on the formal judiciary for contract enforcement of any sort is only true for firms registered under the companies act. To test this hypothesis, column 3 reports the link between court-efficiency and the number of employees in registered firms. As expected, we find that firms employ less when the judiciary is less efficient.

4.3 Robustness

In the analysis so far we used the duration rate index developed in Chemin [2009]. However, our data is more extensive and allows us to construct alternate measures

of efficiency. We test the sensitivity of our results in Table 10 to these alternate measures of efficiency. Table 11 and 12 report the results from using two other indices i.e. disposition time and expected delay. The results are similar to other measures of court inefficiency.

4.4 New Index

In Table 13 we regress delay in registration on the newly constructed index. Column 2 includes the results from duration for the smaller sample consisting of same number of observations for which the new index was used. Since, the proportionate old cases solved is also an inefficiency index, the sign of the variable of interest is in consensus with our expectation.

4.5 Heterogeneity

4.5.1 Gender

We further explore whether more efficient legal frameworks affect the women entrepreneurs differently. In general women are known to have poorer access to community resources in patriarchal societies. Hence, informal norms that guide these patriarchal societies are more likely to hinder the growth of women entrepreneurs. For instance, consider the case of law enforcement. In informal village economies, law enforcement is provided directly by the community. Village level panchayats in India, for example, are often responsible for mitigating the disputes between residents of the same village. In such a set-up, women are unlikely to experience equality before the informal law enforcers who are guided by patriarchal values. In case of any business dispute between a female entrepreneur and any male member of the society, if that female entrepreneur seeks the help of any informal dispute resolution network such as panchayat, a male panchayat leader may be less willing to file a complaint or tender a judgement against a male member of the same society. Hence we test whether in districts with better courts women are more likely run an enterprise compared to men. Table 14 reports the results from this estimation. Similar to the caste results, we find that court inefficiency increases the delay in registration more for the women entrepreneurs.

4.5.2 Caste

Given the historical occupational bindings of the caste system in India, it is well established that occupational mobility across different caste groups is typically very

low in India. In such a setup, formal judicial system has an important role to play in economics mobility of marginalized castes. Traditionally, individuals rely on own caste network to start a new enterprise. A network can not only provide important information needed to start a new enterprise but also provide loan and ensure enforceability of contracts that are required for a business. However, if an individual defects from the traditional occupation then he/she cannot depend on his informal caste network for any future help in terms of loans or contractors to work with. Hence, most individuals tend to stick to the industry that is in the traditional occupational category of his/her caste. However, in the presence of a strong judicial system it is easy for someone to write contracts without the help of his caste network. The anecdotes regarding experiences of successful Dalit entrepreneurs like Devanand Londhe and Ratibhai Makwana hint at such favourable role of formalization. Their transition from "job seekers" to "job givers" would not have been possible had there not been a strong judicial system to ease out the process of writing formal business contract. Hence we argue that a formal judicial system is likely to be more helpful for disadvantaged sections of the society who traditionally do not have a very strong informal network to bank on. Accordingly, in Table15 we test whether delay in registration systematically vary with court inefficiency and caste identity of the owner. Hence, we include an interaction term involving both caste identity and duration rate (ineff1) in the regression term. We find that the coefficient of the interaction term is positive and significant. This implies that inefficient is worse for entrepreneurs if they hail from disadvantaged groups.

Heterogeneity in Caste Proportion

Next, we split the sample of SC/ST into high SC/ST populated region and low SC/ST populated region. Table 16 reports the results from the same. We find that Low SC/ST populated region experience significantly higher delay in registration as compared to SC/ST thriving from High SC/ST populated region. This could be due to a lower advantages of informal networks for the latter.

5 Conclusion

Enforcing contract is critical for business proliferation. However, in less developed countries with inefficient courts, the informal networks are ubiquitous for enforcing contracts. The prohibitively high court costs in India – mostly because of the time it takes to settle a case in court – make moving to court for resolving disputes the last option for an entrepreneur. But theoretically, people choose not to move to court under two types of circumstances – when courts are very good and nobody breaches a contract, and when the courts are so bad that going to court cannot provide a

remedy. Therefore, the direct effects of these two different qualities of the court system are the same on the number of litigation (low in both cases) However, the *shadow effects* of differing court quality will be different for the number of contracts. There will be more contracts signed under a good court regime than a bad court one. In this paper we try to estimate this shadow effect by exploiting the district level court quality variation within the state of West Bengal. We find that the *shadow* indeed works – districts with better court efficiency have bigger firm sizes than the districts with inefficient courts. Moreover, firm registrations are larger in districts with higher court efficiency. More importantly, we find that socially disadvantaged groups such as scheduled caste/tribes (SC/ST) benefit more than their general caste counterpart. We find the districts with better court have more business run by SC/ST than the districts with inefficient courts. We also find that good courts help women entrepreneurs as well – districts with good courts have more number of women entrepreneurs. To summarize, we find significant impact of formal court system on entrepreneurship. Our findings suggest that improving formal court helps entrepreneurs in general – but the effect is stronger for socially disadvantaged groups such as women and SC/ST.

References

- D Acemoglu, S Johnson, and J Robinson. The colonial origins of comparative development. *The American Economic Review*, 91(5):1369–1401, 2001.
- D Acemoglu, S Johnson, and J Robinson. Reversal of fortune: geography and institutions in the making of the modern world income distribution. *Quarterly Journal of Economics*, 117(4):1231–1294, 2002.
- Daron Acemoglu and Simon Johnson. Unbundling institutions. Technical report, National Bureau of Economic Research, 2003.
- Reshad N Ahsan. Input tariffs, speed of contract enforcement, and the productivity of firms in india. *Journal of International Economics*, 90(1):181–192, 2013.
- Matthieu Chemin. Do judiciaries matter for development? evidence from india. *Journal of Comparative Economics*, 37(2):230–250, 2009.
- Matthieu Chemin. Does court speed shape economic activity? evidence from a court reform in india. *Journal of Law, Economics, and Organization*, 28(3):460–485, 2012.
- Leora Klapper, Luc Laeven, and Raghuram Rajan. Entry regulation as a barrier to entrepreneurship. *Journal of Financial Economics*, 82(3):591–629, 2006.
- R Rajan and L Zingales. Financial dependence and growth. *The American Economic Review*, 88(5):559–586, 1998.

Table 1: Data Coverage

States	Years
Assam	2010-2016
Andhra Pradesh*	2000-2013
Bihar*	2000-2013
Chandigarh	2011-2015
Chhattisgarh	2008-2013
Delhi	2011-2015
Haryana	2011-2015
Himachal Pradesh*	2000-2013
Jharkhand*	2001-2013
Kerala*	2006-2013
Odisha	2008-2016
Puducherry*	2000-2013
Punjab	2011-2015
Rajasthan*	2000-2013
Sikkim*	2000-2013
Tamil Nadu*	2000-2013
Telangana*	2000-2013
Uttar Pradesh	2008-2013
West Bengal*	2000-2013

*We use district level data from the courts of eleven states covering around 200 districts for the period 2000-2007

Table 2: Court Summary

VARIABLES	(1) N	(2) mean	(3) sd	(4) min	(5) max
yr_begin	3,823	11,444	14,817	0	171,505
during_yr	3,811	5,369	7,574	2	133,253
disposed	3,810	5,182	7,730	2	140,943
yr_end	3,825	11,616	14,824	2	157,607
zro_one_yr	2,817	4,306	5,378	0	56,349
one_to_five_yr	2,812	4,995	7,085	0	68,982
fve_ten_yr	2,804	2,758	4,198	0	40,498
ten_plus	2,787	1,076	2,061	0	22,954

Table 3: Ethnic and Gender Identity of entrepreneurs

VARIABLES	(1) N	(2) mean	(3) sd	(4) min	(5) max
own_rh	171,223	0.878	0.327	0	1
own_sc	171,223	0.0863	0.281	0	1
own_st	171,223	0.0150	0.122	0	1
own_obc	171,223	0.550	0.497	0	1
own_male	171,223	0.742	0.438	0	1
man_male	171,223	0.772	0.419	0	1
rural	171,223	0.428	0.495	0	1

Table 4: Ethnic and Gender Identity of entrepreneurs: Rural

VARIABLE	(1) N	(2) mean	(3) sd	(4) min	(5) max
own_rh	73,279	0.876	0.330	0	1
own_sc	73,279	0.107	0.309	0	1
own_st	73,279	0.0191	0.137	0	1
own_obc	73,279	0.514	0.500	0	1
own_male	73,279	0.740	0.439	0	1
man_male	73,279	0.767	0.423	0	1

Table 5: Ethnic and Gender Identity of entrepreneurs: Urban

VARIABLES	(1) N	(2) mean	(3) sd	(4) min	(5) max
own_rh	97,944	0.880	0.325	0	1
own_sc	97,944	0.0708	0.257	0	1
own_st	97,944	0.0120	0.109	0	1
own_obc	97,944	0.577	0.494	0	1
own_male	97,944	0.744	0.436	0	1
man_male	97,944	0.776	0.417	0	1

Table 6 : Summary Statistics of Firm Performance

VARIABLE	(1) N	(2) mean	(3) sd	(4) min	(5) max
dereg	171,223	0.660	1.293	0	7
samereg	171,223	0.696	0.460	0	1
tot_emp	171,223	5.047	23.76	0	5,475

Table 7: Summary Statistics of Firm Performance: Rural

VARIABLES	(1) N	(2) mean	(3) sd	(4) min	(5) max
dereg	73,279	0.642	1.258	0	7
samereg	73,279	0.694	0.461	0	1
tot_emp	73,279	5.412	32.99	0	5,475

Table 8 : Summary Statistics of Firm Performance : Urban

VARIABLE	(1) N	(2) mean	(3) sd	(4) min	(5) max
dereg	97,944	0.675	1.318	0	7
samereg	97,944	0.698	0.459	0	1
tot_emp	97,944	4.773	13.14	1	900

Table 9: Baseline Regression

Dependent Variable: Delay						
VARIABLES	(1) None	(2) +Region	(3) +Caste	(4) +Religion	(5) +Owner_Gender	(6) +Manager_Gendr
duration	0.1020*** (0.02339)	0.1015*** (0.02334)	0.1011*** (0.02318)	0.1011*** (0.02318)	0.1013*** (0.02323)	0.1014*** (0.02323)
rural		-0.08381*** (0.02093)	-0.08695*** (0.02116)	-0.08740*** (0.02121)	-0.08748*** (0.02123)	-0.08760*** (0.02120)
SC_Owner			0.08904** (0.03498)	0.08562** (0.03518)	0.08482** (0.03497)	0.08451** (0.03506)
ST_Owner			0.06129 (0.05538)	0.05978 (0.05550)	0.05960 (0.05552)	0.05941 (0.05551)
OBC_Owner			0.07703** (0.03505)	0.07444** (0.03538)	0.07488** (0.03554)	0.07494** (0.03551)
hindu_owner				0.03332* (0.01988)	0.03284 (0.01999)	0.03286 (0.01999)
male_owner					-0.01932 (0.02557)	-0.008967 (0.02880)
manager_male						-0.01411 (0.02919)
Region						
Constant	0.2978*** (0.08523)	0.3366*** (0.08427)	0.2894*** (0.09138)	0.2621*** (0.09124)	0.2757*** (0.09095)	0.2788*** (0.09189)
Observations	155,825	155,825	155,825	155,825	155,825	155,825
R-squared	0.144	0.144	0.145	0.145	0.145	0.145
District FE	YES	YES	YES	YES	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 10: Business Efficiency Measures

VARIABLES	(1) delay	(2) same_reg	(3) tot_emp+
duration	0.1014*** (0.02323)	-0.01595** (0.006369)	-0.2882* (0.1650)
rural	-0.08760*** (0.02120)	0.01716** (0.008321)	0.6324 (0.3930)
SC_Owner	0.08451** (0.03506)	-0.01316 (0.01323)	-3.9100*** (0.7072)
ST_Owner	0.05941 (0.05551)	-0.003577 (0.01591)	-3.5586*** (0.5388)
OBC_Owner	0.07494** (0.03551)	-0.01957 (0.01413)	-3.7610*** (0.5600)
hindu_owner	0.03286 (0.01999)	-0.007717 (0.006604)	0.5491 (0.3529)
male_owner	-0.008967 (0.02880)	0.006463 (0.01075)	0.4119 (0.3278)
manager_male	-0.01411 (0.02919)	0.01338 (0.01149)	2.5085*** (0.3481)
Constant	0.2788*** (0.09189)	0.7406*** (0.02966)	5.5151*** (0.5763)
Observations	155,825	155,825	171,000
R-squared	0.145	0.160	0.010
District FE	YES	YES	NO

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

+: duration is as of 2007

Table 11: Robustness Check based on Disposition Time

VARIABLES	(1) delay	(2) samereg	(3) tot_emp+
disposition_time	0.09793*** (0.02357)	-0.01570** (0.006450)	-0.2946* (0.1666)
rural	-0.08779*** (0.02121)	0.01719** (0.008318)	0.6335 (0.3928)
SC_Owner	0.08447** (0.03508)	-0.01314 (0.01323)	-3.9092*** (0.7077)
ST_Owner	0.05939 (0.05552)	-0.003548 (0.01591)	-3.5599*** (0.5390)
OBC_Owner	0.07469** (0.03554)	-0.01952 (0.01413)	-3.7617*** (0.5603)
hindu_owner	0.03275 (0.01999)	-0.007701 (0.006604)	0.5484 (0.3529)
male_owner	-0.009059 (0.02878)	0.006483 (0.01074)	0.4132 (0.3278)
manager_male	-0.01371 (0.02918)	0.01334 (0.01149)	2.5087*** (0.3485)
Constant	0.3904*** (0.07252)	0.7238*** (0.02444)	5.2418*** (0.4922)
Observations	155,825	155,825	171,000
R-squared	0.144	0.160	0.010
District FE	YES	YES	NO

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

+: disposition time is as of 2007

Table 12: Robustness Check based on Expected Delay

VARIABLES	(1) delay	(2) samereg	(3) tot_emp+
expected_delay	0.1094*** (0.02565)	-0.01715** (0.007085)	-0.3006* (0.1676)
rural	-0.08737*** (0.02118)	0.01713** (0.008317)	0.6380 (0.3919)
SC_Owner	0.08463** (0.03506)	-0.01318 (0.01323)	-3.9089*** (0.7078)
ST_Owner	0.05908 (0.05548)	-0.003531 (0.01590)	-3.5592*** (0.5389)
OBC_Owner	0.07502** (0.03560)	-0.01958 (0.01415)	-3.7642*** (0.5600)
hindu_owner	0.03284 (0.01999)	-0.007714 (0.006606)	0.5492 (0.3526)
male_owner	-0.009269 (0.02879)	0.006509 (0.01074)	0.4138 (0.3275)
manager_male	-0.01434 (0.02920)	0.01341 (0.01149)	2.5074*** (0.3481)
Constant	0.3604*** (0.07673)	0.7276*** (0.02568)	5.2484*** (0.4880)
Observations	155,825	155,825	171,000
R-squared	0.145	0.160	0.010
District FE	YES	YES	NO

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

+: expected delay is as of 2007

Table 13: New Index and Duration

Dependent Variable: Delay		
VARIABLES	(1) duration	(2) proportionate_old_cases_solved
duration	0.03981*** (0.01386)	
proportionate_old_cases_solved		0.5856*** (0.2071)
rural	-0.03043** (0.01256)	-0.02971** (0.01252)
SC_Owner	-0.008594 (0.01989)	-0.008924 (0.01991)
ST_Owner	-0.03603 (0.02654)	-0.03522 (0.02623)
OBC_Owner	-0.008439 (0.01240)	-0.009162 (0.01239)
male_owner	0.002538 (0.01465)	0.002144 (0.01470)
manager_male	0.03328* (0.01937)	0.03382* (0.01946)
hindu_owner	0.01161 (0.01488)	0.01214 (0.01490)
Constant	0.05330 (0.05540)	0.1016** (0.03958)
Observations	31,083	31,083
R-squared	0.181	0.181
District FE	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 14: Heterogeneity analysis based on gender
 Dependent Variable: Delay

VARIABLES	(1) Female
duration	0.09944*** (0.02297)
rural	-0.08742*** (0.02119)
SC_Owner	0.08515** (0.03507)
OBC_Owner	0.07492** (0.03550)
ST_Owner	0.05981 (0.05558)
female_owner	-0.04050 (0.04072)
owner_femalexduration	0.01386 (0.008576)
manager_male	-0.01459 (0.02915)
hindu_owner	0.03270 (0.02000)
Constant	0.2777*** (0.09662)
Observations	155,825
R-squared	0.145
District FE	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 15: Heterogeneity analysis based on caste
 Dependent Variable: Delay

VARIABLES	(1) SC/ST
duration	0.1232*** (0.03413)
rural	-0.1019*** (0.03017)
owner_sc_or_st	-0.02150 (0.05954)
owner_sc_or_stxduration	0.02952** (0.01427)
male_owner	0.02924 (0.03561)
manager_male	-0.04797 (0.03224)
hindu_owner	0.05290* (0.03125)
Constant	0.3344*** (0.1293)
Observations	71,725
R-squared	0.178
District FE	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 16: SC/ST Heterogeneity in Caste Proportion

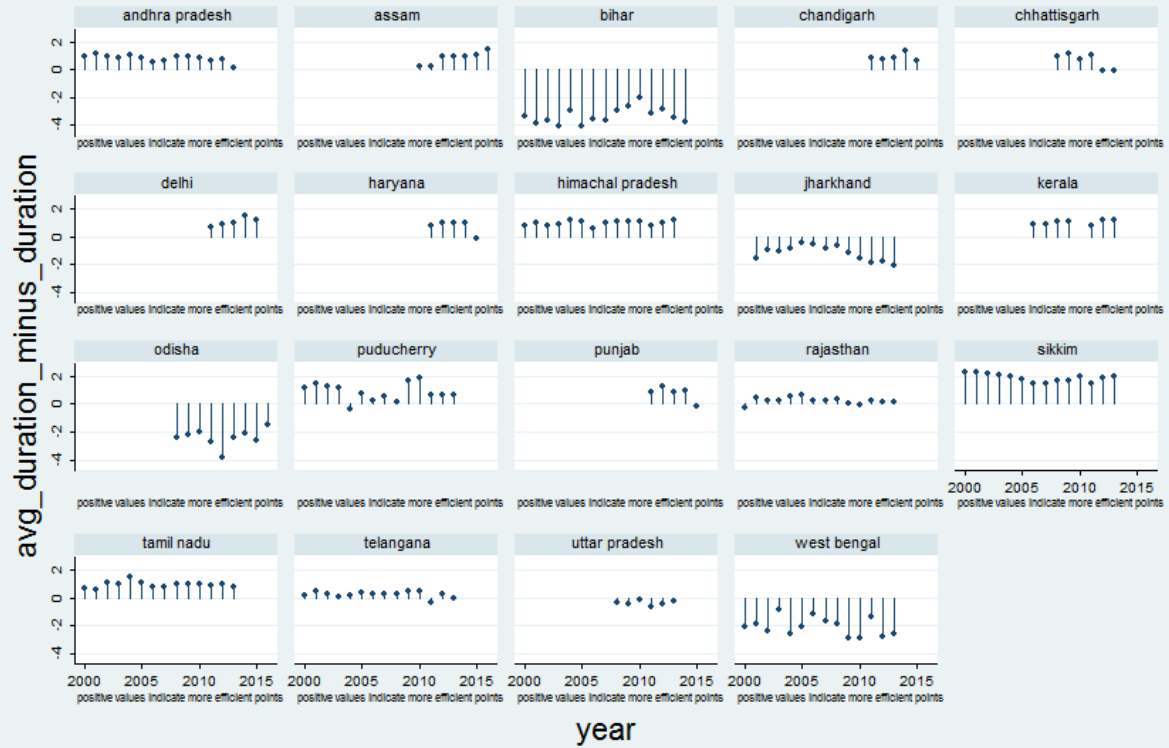
Dependent Variable: Delay

VARIABLES	(1) High SC/ST Populated Region	(2) Low SC/ST Populated Region
duration	0.05568 (0.05565)	0.1471** (0.05746)
rural	-0.2608*** (0.07830)	-0.1996*** (0.06321)
male_owner	0.01737 (0.07482)	0.1443* (0.07740)
manager_male	0.01836 (0.07473)	-0.2263*** (0.07960)
hindu_owner	0.1325* (0.07943)	0.06115 (0.06144)
Constant	0.8092*** (0.2105)	0.1108 (0.2173)
Observations	6,738	9,179
R-squared	0.255	0.174
District FE	YES	YES

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Figure 1: State-wise Duration compared to National Average



Graphs by state

Figure 2: Inefficiency Index (Duration) 2001

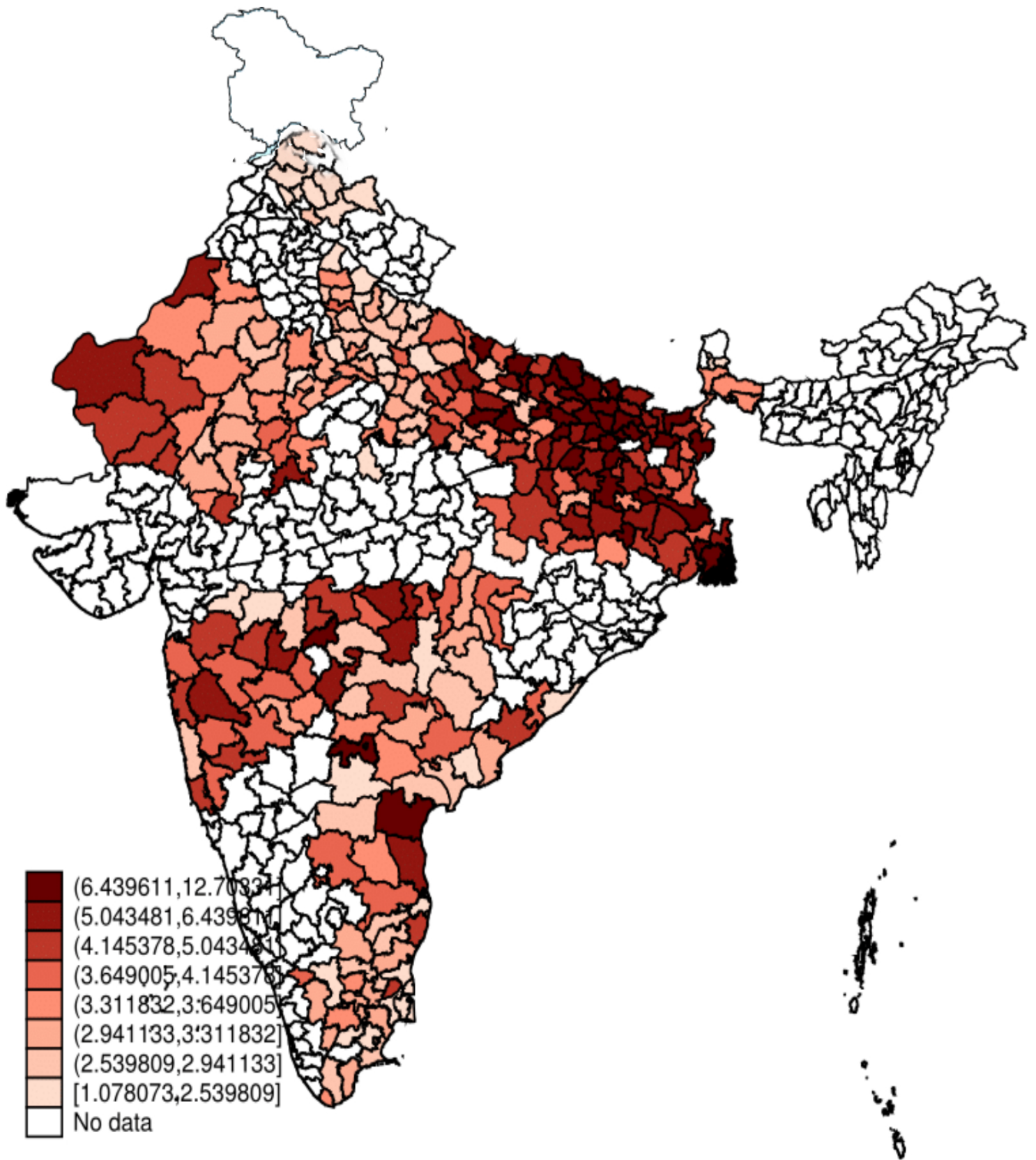
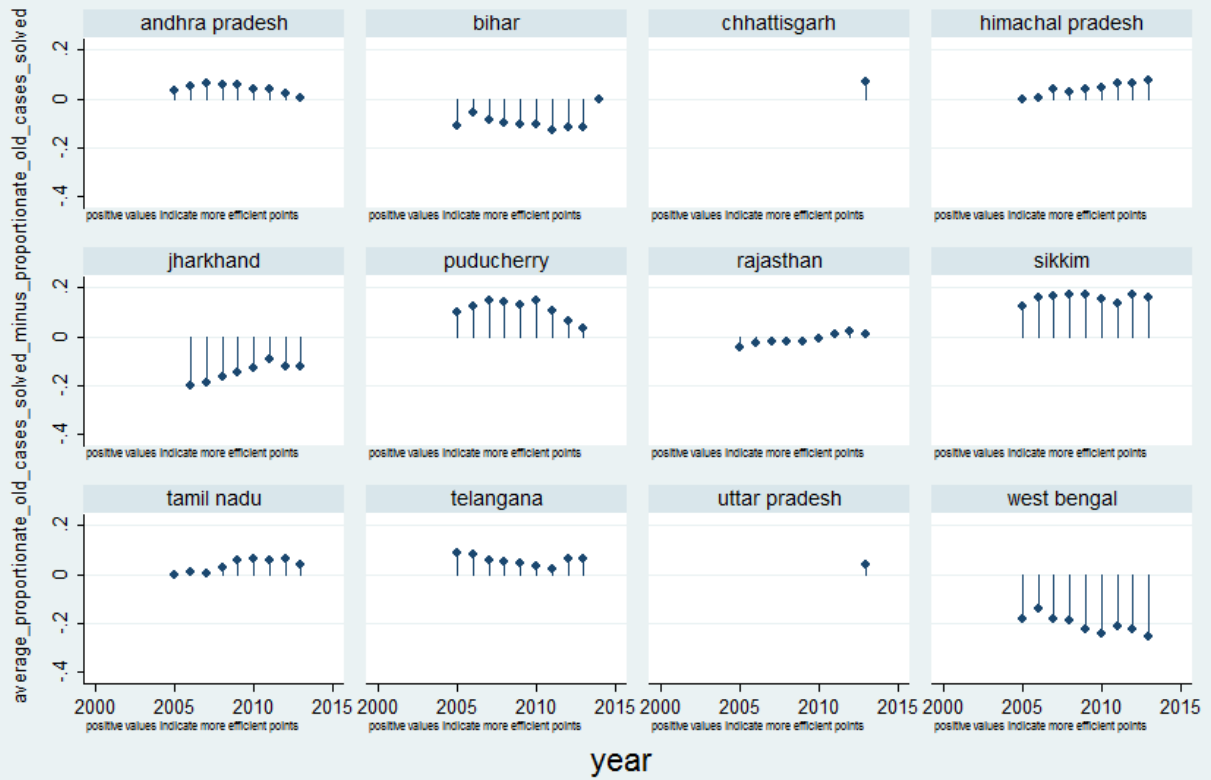


Figure 4: State-wise Proportionate Old Cases Solved compared to National Average



Graphs by state