Appendices for Online Publication Only

A List of Size-Based Regulations in India

Name of Act	Size-based threshold	Nature of size-based threshold	Definition of worker/employee	Notes
The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996	10+ building workers	Regulates employment and conditions of service. Also includes registration requirements for all establishments with 10+ workers.	“ ’building worker’ means a person who is employed to do any ... work for hire or reward, whether the terms of employment be expressed or implied.”	
The Employees’ State Insurance Act, 1948	10+ workers	Provides for health, maternity and employment injury insurance to industrial workers. Sets up medical benefit councils, requires enterprises to “furnish returns and maintain registers”, etc.	An "employee" is a person employed for wages - whether directly or indirectly, permanent or temporary	applies to government establishments; originally applicable to all “factories” but since extended to shops, hotels, etc
The Factories Act, 1948	10+/20+: 10+ workers with power, 20+ workers without power	Regulates employment and conditions of service. Also includes registration requirements for all establishments with 10+/20+ workers.	" ’worker’ means a person employed, directly or by or through any agency (including a contractor) with or without the knowledge of the principal employer, *whether for remuneration or not*”	applies to government establishments (but not armed forces)
The Industrial Disputes Act, 1947	10+, 50+, 100+ [permanent] workers	Sets out procedures to govern the investigation and settlement of industrial disputes between firms, workers and trade unions.	the thresholds at 50 and 100 are for permanent employees only (i.e. contract workers are excluded)	applies to government establishments
The Maternity Benefits Act, 1961	10+ employees	regulates maternity benefits		applies to government establishments

Name of Act	Size-based threshold	Nature of size-based threshold	Definition of worker/employee	Notes
Payment of Gratuity Act, 1972	10+ employees	Requires and regulates the payment of gratuities to workers upon resignation or retirement (at a rate of 15 days salary per year of service).	any person employed for wages, whether the terms of such employment are express or implied	government establishments have their own version of gratuities as laid out in the pay commissions
Labour Laws (Exemption from Furnishing Returns and Maintaining Registers by Certain Establishments) Act, 1988	10+; 20+ employees	Allows "small" (10-19) and "very small" (1-9) establishments to keep significantly simpler records and registers.		
Payment of Bonus Act, 1965	10+/20+ workers; applies to "every factory" AND "every other establishment" with 20+ workers	Requires bonuses to be paid out of profits based on productivity. The minimum bonus was 8.33% of salary in 2005.	"any person employed on salary not exceeding Rs. 10,000 per month in any industry to do any ... work"	government establishments have their own version of bonuses as laid out in the pay commissions
Payment of Wages Act, 1936	10+/20+: applies to persons employed in any factory or an assortment of other industries specified in the law.	"[R]egulate[s] the payment of wages of certain classes of employed persons"; This act requires employers to pay employees in a timely fashion and establishes a significant amount of bureaucracy to ensure this end.	includes workers hired through subcontractors	this law was passed during the colonial era to address the problem of non-payment or delayed payment of workers.
The Personal Injuries (Compensation Insurance) Act, 1963	10+/20+: applies to persons employed in any factory and a few other industries specified in the law (e.g. mines).	Imposes liability on employers to compensate workers for injury.		
The Contract Labour (Regulation and Abolition) Act, 1970	20+ contract workers	Regulates employment of contract labour.	contract workers (hired through a contractor)	

Name of Act	Size-based threshold	Nature of size-based threshold	Definition of worker/employee	Notes
The Employees' Provident Fund and Miscellaneous Provisions Act, 1952	20+: Applies "to every establishment which is a factory engaged in any industry specified in Schedule I and in which twenty or more persons are employed"	Establishes "contributory provident funds" for workers in certain industries and establishments (currently 24% of wage - split equally between employer and employee).	" 'employee' means any person who is employed for wages in any kind of work"	does not apply to government establishments
Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act,1979	5+; applies to every establishment or contractor that employs 5 or more inter state migrant workers	This act came about in response to perceived exploitation of migrant workers and thus aims "to regulate the employment of inter-State migrant workmen and to provide for their conditions of service..."		
The Motor Transport Workers Act, 1961	5+: "applies to every motor transport undertaking employing five or more motor transport workers"	Regulates employment and conditions of service (like Factories Act but specifically for Motor Transport Workers). Also includes registration requirements for all establishments with 5+ workers.	"a person who is employed in a motor transport undertaking directly or through an agency, whether for wages or not..."	
The Trade Unions Act, 1926	7+: Requires at least 7 members of a non-registered trade union to apply for the union's registration.	Defines the conditions under which it is possible to form a trade union.		
The Plantations Labour Act, 1951	15+ (and 5+ hectares of land): applies to plantations that grow tea, coffee, rubber or cardamom, and which have 15+ workers AND 5+ hectares of land	Regulates employment and conditions of service (like the Factories Act but specifically for Plantation Workers in Tea, Coffee, etc plantations). Also includes registration requirements for all establishments with 15+ workers and 5+ hectares of land.		

Name of Act	Size-based threshold	Nature of size-based threshold	Definition of worker/employee	Notes
The Industrial Employment (Standing Orders) Act, 1946	100+	Requires establishments to define "the conditions of recruitment, discharge, disciplinary action, [etc]".		

Note: This table includes a comprehensive list of size-based labor regulations in India. Empty cells denote non-applicable or missing information. Source: All information including direct quotes taken from Universal Law Publishing Company (2013).

B Omitted Proofs Regarding the Theoretical Log Density of Firm Size With and Without Misreporting

B.1 Derivation of the theoretical log density without misreporting

The model we present in Section 4.1 of the paper augments the GLV framework by incorporating strategic misreporting. In this part of the appendix, we provide a summary of the basic GLV framework (i.e. without misreporting), including a derivation of the theoretical log density of firm size.[1]

As noted earlier, the primitive of the model is the distribution of managerial ability (α), which is assumed to follow a power law: $\phi(\alpha) = c_\alpha \alpha^{-\beta_\alpha}$, where $c_\alpha \equiv (\beta_\alpha - 1)\underline{\alpha}^{\beta_\alpha - 1}$ and $\underline{\alpha}$ is the minimum possible value of α[2].

A firm with productivity α and output given by a power function of labor ($f(n) = n^\theta$) faces the following profit-maximization problem:

$$\pi(\alpha) = \max_n \alpha n^\theta - w\bar{\tau}n \tag{1}$$

where again, n is the number of workers a firm employs, w is a constant wage paid to all workers, and $\bar{\tau}$ is a proportional tax on labor that takes the value 1 if $n \leq N$ and $1 + \tau$ if $n > N$, where $\tau > 0$. The resulting first order condition suggests the following general relationship between employment and productivity: $n^*(\alpha) = (\frac{\theta}{w\bar{\tau}})^{\frac{1}{1-\theta}}(\alpha)^{\frac{1}{1-\theta}}$. However, this relationship is discontinuous at N and only applies for interior solutions: some firms will find it profitable to choose the corner solution of $n(\alpha) = N$ rather than $n^*(\alpha)$.

In fact, firms can be sorted into three categories, according to their productivity, α.

1) Firms with the lowest values of $\alpha(\in [\underline{\alpha}, \alpha_1])$ are not affected by the regulation and choose their optimal employment in an unrestricted way. In particular they choose $n^*(\alpha) = (\frac{\theta}{w})^{\frac{1}{1-\theta}}(\alpha)^{\frac{1}{1-\theta}} \leq N$. α_1 is defined such that $\pi(n^*(\alpha_1)) = \pi(N)$, where $n^*(\alpha_1) = (\frac{\theta}{w})^{\frac{1}{1-\theta}}(\alpha_1)^{\frac{1}{1-\theta}}$.

2) Firms with productivity larger than α_1 but lower than another threshold ($\alpha \in (\alpha_1, \alpha_2]$), find it optimal to choose $n^*(\alpha) = N$, rather than exceed the threshold and expose themselves to the discontinuously higher costs associated with the size-based regulation.

[1] The analysis here follows closely from that of GLV (see their Appendix B for their derivation).

[2] These last two assumptions are needed to satisfy $\int_{\underline{\alpha}}^{\infty} \phi(\alpha) = 1$.

3) The last category includes those firms with the highest productivities ($\alpha > \alpha_2$). These firms find it optimal to exceed the threshold even though it means paying higher unit labor costs: $n^*(\alpha) = (\frac{\theta}{w(1+\tau)})^{\frac{1}{1-\theta}}(\alpha)^{\frac{1}{1-\theta}}$. α_2 is defined such that $\pi(n^*(\alpha_2)) = \pi(N)$, where $n^*(\alpha_2) = (\frac{\theta}{w(1+\tau)})^{\frac{1}{1-\theta}}(\alpha_2)^{\frac{1}{1-\theta}}$.

To summarize then, a full mapping between productivity α and firm size n is given by:

$$n(\alpha) = \begin{cases} (\frac{\theta}{w})^{\frac{1}{1-\theta}}(\alpha)^{\frac{1}{1-\theta}} \leq N & if \quad \alpha \in [\underline{\alpha}, \alpha_1] \\ N & if \quad \alpha \in (\alpha_1, \alpha_2] \\ (\frac{\theta}{w(1+\tau)})^{\frac{1}{1-\theta}}(\alpha)^{\frac{1}{1-\theta}} > N & if \quad \alpha > \alpha_2 \end{cases}$$

An exact expression for the distribution of firm size, $\chi(n)$, can now be recovered as a transformation of the distribution of managerial ability, $\phi(\alpha)$, since the first-order conditions on the firms' maximization problems imply the monotonic relationship between α and n described above. Specifically, we transform $\phi(\alpha)$ into $\chi(n)$ using the change of variables formula along with the complete expression for $n(\alpha)$ above:

$$\chi(n) = \begin{cases} \left(\frac{1-\theta}{\theta}\right)^{1-\beta}(\beta-1)n^{-\beta} & if \quad n \in [n_{\min}, N) \\ \left(\frac{1-\theta}{\theta}\right)^{1-\beta}(N^{1-\beta} - (1+\tau)^{-\frac{\beta-1}{1-\theta}} n_u^{1-\beta}) & if \quad n = N \\ 0 & if \quad n \in (N, n_u) \\ \left(\frac{1-\theta}{\theta}\right)^{1-\beta}(\beta-1)(1+\tau)^{-\frac{\beta-1}{1-\theta}} n^{-\beta} & if \quad n \geq n_u \end{cases}$$

From here one can complete the derivation for the case without misreporting by simply taking logs to obtain the theoretical log density of firm size:

$$log\chi(n) = \begin{cases} log[\left(\frac{1-\theta}{\theta}\right)^{1-\beta}(\beta-1)] - \beta log(n) & if \quad n \in [n_{\min}, N) \\ log[\left(\frac{1-\theta}{\theta}\right)^{1-\beta}(N^{1-\beta} - (1+\tau)^{-\frac{\beta-1}{1-\theta}} n_u^{1-\beta})] & if \quad n = N \\ - & if \quad n \in (N, n_u) \\ log[\left(\frac{1-\theta}{\theta}\right)^{1-\beta}(\beta-1)] - \left(\frac{\beta-1}{1-\theta}\right)(1+\tau) - \beta log(n) & if \quad n \geq n_u \end{cases}$$

B.2 Full Derivation of the Theoretical Log Density With Misreporting

In this part of the appendix, we include the steps omitted in section 4.1 when deriving the theoretical log density of true and reported firm size in the presence of misreporting. We begin by restating the profit-maximization problem (in Equation 1) for a firm that is now allowed to choose both its true employment (n) and its *reported* employment (l):

$$\pi(\alpha) = \max_{n,l} \alpha f(n) - wn - \tau wl * \mathbb{1}\{l > 9\} - q(n) * p(n,l) * F(n,l)$$

where $\alpha, f(n), w$ and τ are all defined as they were previously. As noted, the problem is similar to the case without misreporting except that now firms pay the extra marginal cost, τw, only on their *reported* employment, and not on their true employment. Furthermore, they only pay this cost if their reported employment exceeds the regulatory threshold, $N = 9$. The other new elements are $q(n)$, which gives the probability of inspection as a function of firm size, $p(n, l)$, which is the probability that a misreporting firm is caught by the authorities conditional on being inspected and $F(n, l)$, which is the fine that a firm caught misreporting must pay. Therefore, firms must trade off the benefit of lower regulatory costs from under-reporting their employment against the expected cost of being caught and fined for under-reporting ($M = q * p * F$).

For now we assume a particular functional form for the misreporting costs, $M(n, l) = \frac{F}{n_{max}}(n - l)^2$, but we show in the next two subsections of this Appendix that 1) our main result obtains for any convex form of misreporting costs, and 2) non-convex misreporting costs either do not fit the data or generate similar conclusions. We also reintroduce our earlier assumption that firms' production functions are power ($f(n) = n^\theta$), so that the profit maximization problem for a firm with productivity α is:

$$\pi(\alpha) = \max_{n,l} \alpha n^\theta - wn - \tau wl * \mathbb{1}\{l > 9\} - F * \frac{(n-l)^2}{n_{max}}.$$

As before, the solution to this problem looks different depending on which of three different productivity categories the firm falls into:

1) Firms with the lowest values of $\alpha(\in [\underline{\alpha}, \alpha_1])$ are not affected by the regulation and choose their optimal employment in an unrestricted way. In particular they choose $n_1^*(\alpha) = (\frac{\theta}{w})^{\frac{1}{1-\theta}}(\alpha)^{\frac{1}{1-\theta}} \leq N$. Because their true employment is below the regulatory threshold, they have no incentive to misreport and hence choose $l_1^*(\alpha) = n_1^*(\alpha)$. α_1 is defined such that $\pi(n_1^*(\alpha_1)) = \pi(N)$, where $n_1^*(\alpha_1) = (\frac{\theta}{w})^{\frac{1}{1-\theta}}(\alpha_1)^{\frac{1}{1-\theta}}$.

2) Firms with productivity larger than α_1 but lower than another threshold ($\alpha \in (\alpha_1, \alpha_2]$), will choose $n > N$, exceeding the regulatory threshold, but will find it profitable to misreport their employment, setting $l_2^*(\alpha) = N$.[3] These firms will only *appear* to be "bunched" up at 9, but will in fact have higher employment. The employment function, $n_2^*(\alpha)$, for these firms is defined implicitly from the first order condition: $\alpha\theta n_2^*(\alpha)^{\theta-1} - w - \frac{2F}{n_{max}}[n_2^*(\alpha) - N] = 0$.

3) The last category includes those firms with the highest productivities ($\alpha > \alpha_2$). These firms are productive enough to warrant hiring work forces so large that they cannot choose $l = 9$ while simultaneously avoiding detection with reasonable probability and must report $l > 9$. Even these firms, however, with both $n > 9$ and $l > 9$ do not find it profit-maximizing to report truthfully. From the first order condition on l we get: $l_3^*(\alpha) = n_3^*(\alpha) - \frac{n_{max}}{2F}w\tau$. In other words, these firms can save on their unit labor costs by shading down their reported employment. Importantly, the degree of misreporting is by a constant amount that is independent of firm size ($\frac{n_{max}}{2F}w\tau$).[4] These firms set their true employment according to: $n_3^*(\alpha) = (\frac{\theta}{w(1+\tau)})^{\frac{1}{1-\theta}}(\alpha)^{\frac{1}{1-\theta}}$. α_2 is defined such that $\pi(n_3^*(\alpha_2)) = \pi(n_2^*(\alpha_2))$, where $n_3^*(\alpha_2) = (\frac{\theta}{w(1+\tau)})^{\frac{1}{1-\theta}}(\alpha_2)^{\frac{1}{1-\theta}}$, and thus marks the productivity of a firm that is indifferent between reporting employment just below the threshold ($l(\alpha_2) = N$) (while choosing true employment $n_2^*(\alpha_2) > N$), and admitting that it is over the threshold ($l^*(\alpha_2) = n_3^*(\alpha_2) - \frac{n_{max}}{2F}w\tau$), which would allow it to choose a higher level of true employment ($n_3^*(\alpha_2) > n_2^*(\alpha_2)$). We will denote $n_2^*(\alpha_2)$ by $n_m(\alpha_2)$, $n_3^*(\alpha_2)$ by $n_t(\alpha_2)$ and, similarly, $l_3^*(\alpha_2)$ by $l_t(\alpha_2)$. The region between

[3] Conditional on misreporting a positive amount, setting $l = N$ is the "optimal lie" for these firms since it yields the largest benefit (by reducing firms' regulatory burden to 0) while minimizing the misreporting costs.

[4] This outcome is a result of the convex cost assumption on the misreporting function.

$n_m(\alpha_2)$ and $n_t(\alpha_2)$ is a strictly dominated region in which no firms should set their optimal employment level.

To summarize then, full mappings between productivity α and the true firm size n, as well as between productivity α and reported firm size l, are given by:

$$n^*(\alpha) = \begin{cases} (\frac{\theta}{w})^{\frac{1}{1-\theta}}(\alpha)^{\frac{1}{1-\theta}} \leq N & if \quad \alpha \in [\underline{\alpha}, \alpha_1] \\ n_2^*(\alpha) & if \quad \alpha \in (\alpha_1, \alpha_2] \\ (\frac{\theta}{w})^{\frac{1}{1-\theta}}(1+\tau)^{-\frac{1}{1-\theta}}(\alpha)^{\frac{1}{1-\theta}} > N & if \quad \alpha > \alpha_2 \end{cases}$$

$$l^*(\alpha) = \begin{cases} (\frac{\theta}{w})^{\frac{1}{1-\theta}}(\alpha)^{\frac{1}{1-\theta}} \leq N & if \quad \alpha \in [\underline{\alpha}, \alpha_1] \\ N & if \quad \alpha \in (\alpha_1, \alpha_2] \\ (\frac{\theta}{w})^{\frac{1}{1-\theta}}(1+\tau)^{-\frac{1}{1-\theta}}(\alpha)^{\frac{1}{1-\theta}} - \frac{n_{max}}{2F}w\tau > N & if \quad \alpha > \alpha_2 \end{cases}$$

From these functions we can obtain expressions for the distributions of true and reported firm size, $\chi(n)$ and $\psi(l)$, as transformations of the distribution of managerial ability, $\phi(\alpha)$ (where $\phi(\alpha) = c_\alpha \alpha^{-\beta_\alpha}$), by the change of variables formula:

$$\chi(n) = \begin{cases} c_\alpha(1-\theta)(\frac{\theta}{w})^{\frac{\beta-1}{1-\theta}}n^{-\beta} & if \quad n \in [n_{\min}, N) \\ \left|\frac{d\alpha_2^*(n)}{dn}\right|\phi(\alpha_2^*(n)) & if \quad n \in [N, n_m(\alpha_2)) \\ 0 & if \quad n \in [n_m(\alpha_2), n_t(\alpha_2)) \\ c_\alpha(1-\theta)(\frac{\theta}{w})^{\frac{\beta-1}{1-\theta}}(1+\tau)^{-\frac{\beta-1}{1-\theta}}n^{-\beta} & if \quad n \geq n_t(\alpha_2) \end{cases}$$

$$\psi(l) = \begin{cases} c_\alpha(1-\theta)(\frac{\theta}{w})^{\frac{\beta-1}{1-\theta}}l^{-\beta} & if \quad l \in [n_{\min}, N) \\ \int_{\alpha_1}^{\alpha_2}\phi(\alpha)d\alpha = \delta_l & if \quad l = N \\ 0 & if \quad l \in (N, l_t(\alpha_2)) \\ c_\alpha(1-\theta)(\frac{\theta}{w})^{\frac{\beta-1}{1-\theta}}(1+\tau)^{-\frac{\beta-1}{1-\theta}}[l + \frac{n_{max}}{2F}w\tau]^{-\beta} & if \quad l \geq l_t(\alpha_2) \end{cases}$$

where $\beta = \theta + \beta_\alpha - \theta\beta_\alpha$ and $\alpha_2^*(n)$ is the inverse function of $n_2^*(\alpha)$, implicitly defined above. Taking the logarithm of each expression delivers the version of the distributions shown in the main text:

$$log\chi(n) = \begin{cases} logA - \beta log(n) & if \quad n \in [n_{\min}, N) \\ log[\xi(n)] & if \quad n \in [N, n_m(\alpha_2)] \\ - & if \quad n \in (n_m(\alpha_2), n_t(\alpha_2)) \\ logA - \frac{\beta-1}{1-\theta}log(1+\tau) - \beta log(n) & if \quad n \geq n_t(\alpha_2) \end{cases}$$

$$log\psi(l) = \begin{cases} logA - \beta log(l) & if \quad l \in [l_{\min}, N) \\ log(\delta_l) & if \quad l = N \\ - & if \quad n \in (N, l_t(\alpha_2)) \\ logA - \frac{\beta-1}{1-\theta}log(1+\tau) - \beta log(l + \frac{n_{max}}{2F}w\tau) & if \quad l \geq l_t(\alpha_2) \end{cases}$$

where terms have been simplified with two substitutions.[5] These are the densities described in the main text.

[5] We substituted A for the expression $c_\alpha(1-\theta)(\frac{\theta}{w})^{\frac{\beta-1}{1-\theta}}$ and $\xi(n)$ for $\left|\frac{d\alpha_2^*(n)}{dn}\right|\phi(\alpha_2^*(n)$.

B.3 Proof that Convex Misreporting Costs Imply Convergence Between True and Reported Firm Size Distributions

An important implication of the misreporting model from section 4.1 is that the difference between the log density of reported firm size, $\psi(l)$, and the log density of true firm size, $\chi(n)$, converges to 0 for large values of n, l. In this section of the appendix we show that this result does not hinge on a specific functional form for the misreporting costs, but instead holds whenever the expected costs of misreporting are increasing and strictly convex in the degree of misreporting *and* are independent of firm size.

We replace our former expression for the expected costs of misreporting, $q(n) * p(n,l) * F(n,l)$, with the simpler expression $M(n,l)$, since here we do not need to distinguish between the fine if caught and the probability of being caught. Furthermore, we impose Assumption 1, which allows us to write the problem of a firm with the option of misreporting as follows:

$$\pi(\alpha) = \max_{n,u} \alpha f(n) - wn - \tau w(n-u) * \mathbb{1}\{n-u > 9\} - M(u)$$

This is identical to Equation 1 except for the change in variables (u for $n-l$) and the more general expression for the expected costs of misreporting. Under Assumption 1, the first order condition on u for a large firm (i.e. one whose reported employment exceeds the threshold) is: $\tau w - M'(u) = 0$. The first term denotes the benefit of increasing u by one unit (in terms of regulatory costs avoided) while the second term captures the marginal cost of u. The first term is constant, while the second starts from 0 (for $u = 0$) and increases at an increasing rate. There exists therefore some value of misreporting that satisfies the first order condition, given by $u^* = M'^{-1}(\tau w)$. Note that the optimal value for misreporting, u^*, does not depend on α. This means that, for the largest set of firms, misreporting is by the same constant amount, regardless of firm size or productivity: $l(\alpha) = n(\alpha) - u^*$.

To see that this result is all that is required for the difference between the reported distribution and the true distribution to converge to 0, consider the analysis in the previous sub-appendix, but with the more general result that $u^* = M'^{-1}(\tau w)$. Then, it is straightforward to show that $log\chi(n) = logA - \frac{\beta-1}{1-\theta}log(1+\tau) - \beta log(n)$ and $log\psi(l) = logA - \frac{\beta-1}{1-\theta}log(1+\tau) - \beta log(l+u^*)$ for firms above the threshold. For large values (i.e. $l = n = x \to \infty$), the difference between these two density functions goes to 0:

$\lim_{x\to\infty} log\chi(x) - log\psi(x) = \beta log(x+u^*) - \beta log(x) = \beta log(x(1+\frac{u^*}{x})) - \beta log(x) = \beta log(1+\frac{u^*}{x}) = 0.$

B.4 Alternative Forms of Misreporting

In this part of the appendix, we consider the implications of alternative assumptions regarding the form of strategic misreporting by firms. It is difficult to characterize a general solution that does not impose any structure on the functional form of misreporting, so instead we proceed by considering several different specifications in turn. We conclude by demonstrating that there is only one potential case (or class of cases) under which our results would be biased.

Recall that n represents the number of workers actually employed within a firm, while l represents the number of workers that a firm reports. The level of misreporting is represented by u, where $u \equiv n - l$. We consider four different specific functional forms for the expected costs of misreporting, $M(n, l)$. The expected cost of misreporting is the product of, respectively, the probability of being inspected, the probability of being caught conditional on being inspected, and the fine levied if caught: $M(n, l) \equiv q(n) * p(n, l) * F(n, l)$. It is reasonable to suppose that the probability of being inspected, $q(n)$, is increasing with respect to firm size because it is easier for inspectors to find larger firms (this supposition receives empirical support from Almeida and Ronconi (2016)). Let us in fact assume that q is directly proportional to firm size: $q(n) = \frac{n}{n_{max}}$. The probability of being caught conditional on being inspected should also be an increasing function of either the level of misreporting (u) or the fraction of employees being misreported ($\frac{u}{n}$). We consider the following two specific forms, representing either case: $p(n, l) = \frac{u}{n_{max}}$ or $p(n, l) = \frac{u}{n}$. Last, we allow the fine that a firm must pay if caught to be either fixed or directly proportional to the level of misreporting:[6] $F(n, l) = F$ or $F(n, l) = F * u$.

This leaves us with 4 possible cases for the functional form of $M(n, l)$. Below we consider the implications for our estimation of τ under each case in turn.

B.4.1 Alternative Misreporting Case 1

The first case is that which corresponds to the one we focus on in the text (Section 4.1). In this case, the probability of inspection is directly proportional to firm size, the probability of being caught conditional on inspection is proportional to the fraction of employees being misreported, and the fine if caught is proportional to the level of misreporting: $q(n) = \frac{n}{n_{max}}$; $p(n, l) = \frac{u}{n}$; $F(n, l) = F * u$.

Then, $M(n, l) = q(n) * p(n, l) * F(n, l) = \frac{n}{n_{max}} * \frac{n-l}{n} * F * u = \frac{(n-l)^2}{n_{max}} * F$. This is precisely the case we consider in the text, so the implications are the same.

B.4.2 Alternative Misreporting Case 2

In the next case, we assume that the probability of inspection is directly proportional to firm size, the probability of being caught conditional on inspection is proportional to the fraction of employees being misreported, and the fine if caught is fixed (i.e. independent of the degree of misreporting): $q(n) = \frac{n}{n_{max}}$; $p(n, l) = \frac{u}{n}$; $F(n, l) = F$.

Then, $M(n, l) = q(n) * p(n, l) * F(n, l) = \frac{n}{n_{max}} * \frac{n-l}{n} * F = \frac{(n-l)}{n_{max}} * F$

Under this functional form for the expected cost of misreporting, the firm's problem is as follows:

$$\pi(\alpha) = \max_{n,l} \alpha n^{\theta} - wn - \tau wl * \mathbb{1}\{l > 9\} - F * \frac{(n-l)}{n_{max}}$$

For large firms (i.e. those that would report having more than 9 workers), the marginal cost of increasing l is τw, while the marginal benefit is $\frac{F}{n_{max}}$. There are thus only two possible

[6] In fact it is more intuitive to assume that the fine is proportional to the level of misreporting, but this is not certain from the text of the laws.

cases. Either $\tau w > \frac{F}{n_{max}}$ or $\tau w > \frac{F}{n_{max}}$.[7] If $\tau w > \frac{F}{n_{max}}$, then the marginal cost of increasing l is always too high, so that all large firms will thus choose $l = 9$ and appear to be bunched up at that size. Clearly, this is not consistent with the observed firm size distribution. On the other hand, if $\tau w < \frac{F}{n_{max}}$, then the marginal benefit of increasing l always exceeds the marginal cost so that large firms will find it optimal to set $l = n$. In other words, there will be no misreporting among large firms, so our estimate of the regulatory costs based on the observed firm size distribution will be unbiased (although it is worth noting that in this case our estimate would actually be determined by F, not τ).

B.4.3 Alternative Misreporting Case 3

For case 3, we again require that the probability of inspection be directly proportional to firm size, and that the fine if caught is proportional to the level of misreporting, but we now allow the probability of being caught conditional on inspection to be directly proportional to the *level* of employees being misreported (u): $q(n) = \frac{n}{n_{max}}$; $p(n,l) = \frac{u}{n_{max}}$; $F(n,l) = F * u$.

Then, $M(n,l) = q(n) * p(n,l) * F(n,l) = \frac{n}{n_{max}} * \frac{n-l}{n_{max}} * F * u = \frac{n(n-l)^2}{n_{max}^2} * F$, and the firm's problem is as follows:

$$\pi(\alpha) = \max_{n,l} \alpha n^{\theta} - wn - \tau wl * \mathbb{1}\{l > 9\} - \frac{F}{n_{max}^2} * n(n-l)^2$$

In this case it is helpful to rewrite the problem in terms of u instead of l:

$$\pi(\alpha) = \max_{n,u} \alpha n^{\theta} - wn - \tau w(n-u) * \mathbb{1}\{n - u > 9\} - \frac{F}{n_{max}^2} * n * u^2$$

From the first order condition on u, we get that $u = \frac{\tau w}{2F'} * \frac{1}{n}$, where $F' = \frac{F}{n_{max}^2}$. Thus, the level of misreporting, u, is a decreasing function of firm size, n. Indeed, $\underset{n\to\infty}{u} = 0$. The first order condition on n yields the following expression for n: $n = \left[\frac{w(1+\tau)+F'u^2}{\theta}\right]^{\frac{1}{\theta-1}} \alpha^{\frac{1}{1-\theta}}$. Using the previous result this expression simplifies to the following for large firms: $n = \left[\frac{w(1+\tau)}{\theta}\right]^{\frac{1}{\theta-1}} \alpha^{\frac{1}{1-\theta}}$. This is exactly the same as the solution for n in the absence of misreporting (see Appendix Subsection B.1). Thus, although the analytical solution for this case is not very tractable, the implications are the following: First, the log distribution of true firm size, $log\chi(n)$, will be downshifted at large firm sizes by exactly the same amount as in the case without misreporting. Second, since the level of misreporting is a decreasing function of firm size, with $\underset{n\to\infty}{u} = 0$, the reported distribution will converge to the true distribution at large firm sizes. Therefore, if our estimate of τ is based primarily on large firm sizes, it will be unbiased, as in the primary specification reported in the main text.

B.4.4 Alternative Misreporting Case 4

In case 4, the probability of inspection is again directly proportional to firm size, the probability of being caught conditional on inspection is proportional to the *level* of employees being

[7]There is of course a third possibility, $\tau w = \frac{F}{n_{max}}$, in which firms would be completely indifferent regarding their choice of l, but this is a knife-edge case.

misreported as in Case 3, but now the fine if caught is fixed: $q(n) = \frac{n}{n_{max}}$; $p(n,l) = \frac{u}{n_{max}}$; $F(n,l) = F$.

Then, $M(n,l) = q(n) * p(n,l) * F(n,l) = \frac{n}{n_{max}} * \frac{n-l}{n_{max}} * F = \frac{n(n-l)}{n_{max}^2} * F$, and the firm's problem becomes:

$$\pi(\alpha) = \max_{n,l} \alpha n^{\theta} - wn - \tau wl * \mathbb{1}\{l > 9\} - \frac{F}{n_{max}^2} * n(n-l)$$

From the above it can be seen that for large firms (again, meaning those that would report having more than 9 workers) the marginal cost of increasing l is τw, while the marginal benefit is $\frac{F}{n_{max}^2} * n$. While the marginal cost is fixed, the marginal benefit of increasing l is increasing in n. Thus, for large enough firms, it will become less and less attractive to misreport their true number of employees. Indeed, *all* firms larger than a certain size will find it optimal to report $l = n$, so there will be no misreporting in the right tail, and our estimate of τ will be unbiased - as in the previous cases.

B.4.5 The problematic case

In the cases considered above, we see that, under a variety of potential specific functional forms for misreporting, our estimate of τ remains unbiased. However, it is possible to construct a case that is consistent with the data and still leads to a biased estimate. Below we will describe this case and explain its implications for our estimation strategy.

Suppose now that the probability of inspection is actually independent of firm size. For the sake of specificity, we fix $q(n) = 1$. Further assume that the probability of being caught conditional on inspection is proportional to the fraction of employees being misreported, and that the fine if caught is proportional to the level of misreporting: $p(n,l) = \frac{u}{n}$; $F(n,l) = F{*}u$.

Then, $M(n,l) = q(n) * p(n,l) * F(n,l) = 1 * \frac{n-l}{n} * F(n-l) = \frac{(n-l)^2}{n} * F$.[8] Under this functional form for the expected cost of misreporting, the firm's problem is as follows:

$$\pi(\alpha) = \max_{n,l} \alpha n^{\theta} - wn - \tau wl * \mathbb{1}\{l > 9\} - F * \frac{(n-l)^2}{n}.$$

From the first order condition on l for large firms, we are able to see that $l = f_1(\tau) * n$, where $f_1(\tau) = 1 - \frac{\tau w}{2F}$. Thus, as long as $0 \leq \tau \leq 2F$, then $0 \leq f_1(\tau) \leq 1$ and l will be a *constant fraction* of n. From the first order condition on n (again, for large firms), we can write $n = \left[\frac{w}{\theta} + f_2(\tau)\right]^{\frac{1}{\theta-1}} \alpha^{\frac{1}{1-\theta}}$, where $f_2(\tau) = \frac{\tau w}{\theta}(1 - \frac{\tau w}{4F})$ and $f_2(\tau) > 0$ as long as $0 \leq \tau \leq 2F$. This is reminiscent of the expression for n in the case without misreporting (it would be identical if $f_2(\tau) = \frac{\tau w}{\theta}$), but it is different, which will imply that the distribution will be downshifted by a different (and lesser) degree.

Using these expressions, the distribution of productivity, and the standard change of variables formula, one can show that the log distribution of true firm size at large sizes is given by: $log\chi(n) = logA_1 - \frac{\beta-1}{1-\theta} log\left[\frac{w}{\theta} + f_2(\tau)\right] - \beta log(n)$, where $A_1 \equiv c_{\alpha}(1-\theta)$ and $f_1(\tau)$, $f_2(\tau)$ are defined as above. The log distribution of reported firm size (at large sizes) is given by $log\psi(l) = logA_1 - \frac{\beta-1}{1-\theta} log\left[\frac{w}{\theta} + f_2(\tau)\right] + (\beta-1) log f_1(\tau) - \beta log(l)$. Comparing these with

[8] We have specified particular funcitonal forms for $q(n)$, $p(n,l)$ and $F(n,l)$, but any combination of functional forms that results in the condition that $M(,n,l) \propto \frac{(n-l)^2}{n}$ will have the same implications.

each other as well as the log distribution at small firm sizes (i.e. $n, l < 10$) and the log distribution in the case without misreporting, one can reach the following conclusions about this case.

First, the log distribution of true firm size, $log\chi(n)$, is downshifted at large firm sizes - but by less than in the case without misreporting. In other words, being able to misreport lessens the actual cost of the regulations, even for large firms. Second, firms misreport their true employment by a constant fraction, $(1 - \frac{\tau w}{2F})$, which leads to a downshift in the log distribution of reported firm size *over and above* the downshift in the log distribution of true firm size. This would cause our estimate of τ to be biased upwards. In short, what causes the bias in the case above is that large firms misreport their true employment by a constant *fraction*. Any functional form of misreporting costs that leads firms to behave in this way will have the same implications as above.

In closing we note that this case has a singular quality to it. Since the marginal cost of increasing l is constant ($\frac{\partial \pi(\alpha,n,l)}{\partial l} = \tau w$), the marginal benefit of increasing l, $\frac{\partial \pi(\alpha,n,l)}{\partial l}$, must be increasing with n in just such a way as to ensure that the optimal choice of l increases as a constant fraction of n. If the marginal benefit of increasing l, $\frac{\partial \pi(\alpha,n,l)}{\partial l}$, increases with n "too quickly", then larger firms will find it optimal to report an increasing (not constant) fraction of their true employment, leading to Proposition 1's convergence result. If $\frac{\partial \pi(\alpha,n,l)}{\partial l}$ increases with n "too slowly", larger firms will find that the marginal cost of increasing l outstrips the marginal beneft at ever smaller fractions, which will cause them to report a smaller and smaller fraction of their true employment. In this sense, the problematic case requires a very particular functional form for misreporting to obtain.

B.5 Misreporting by Enumerators

In the text we referred to a second potential source of misreporting: not only might firms lie to enumerators about their size, enumerators themselves might lie when recording the figures reported to them by firms. One reason this might happen is that Economic Census enumerators were required to fill out an extra form containing the address of any establishment that reported 10 or more workers. It is therefore conceivable that enumerators might have found it preferable to under-report the number of workers for establishments with 10 or more workers in order to avoid the extra burden of filling in the "Address Slip". To show that this other source of potential misreporting is unlikely to bias our results, we consider a very simple model of enumerator misreporting. The model demonstrates that, since the cost of filling in the address slip is a fixed cost, it is not likely to lead to a "downshift" in the distribution, which means it is therefore unlikely to bias our estimate of τ.

The model begins with firms facing the same problem specified in Equation 1, with the same resulting distribution of the true firm size, $\chi(n)$. Then, all firms are matched with an enumerator, who must decide how to report the size of the firm they meet. In general, the reported size, l, may or may not be equal to the true firm size, n. If an enumerator reports a size $l > 9$, they must face the burden of filling out an address slip, at cost $C > 0$. If they report $l \leq 9$, they pay no such cost. Importantly, the cost C is constant and does not depend on the size of the firm.[9] Furthermore, enumerators face expected costs of misreporting, $M(u)$,

[9]This reflects the fact that it is no more costly (in terms of time or hassle) to fill in an address slip for a

where $u \equiv n - l$.[10] $M(u)$ captures both the probability of being caught as well as the penalty faced if caught. The only assumptions we make on $M(u)$ are that it is strictly increasing in u and that $M(0) = 0$.[11] Then the utility maximization problem faced by an enumerator matched with a firm of size n is:

$$U(n) = \max_{u} \ -C\mathbb{1}\{n - u > 9\} - M(u)$$

For enumerators matched with firms of size $n < 9$, the optimal decision is to choose $l = n$, or $u = 0$, because there is no need to misreport. Then, their utility is maximized at 0. Enumerators matched with firms larger than 9 must decide whether to report the size truthfully and bear the address slip cost or lie in order to avoid the cost of filling out the address slip. Since $M(u)$ is increasing in u, misreporting costs will be lower than C for low values of u and higher than C for high enough values.[12] Therefore, enumerators matched with firms of an intermediate size (i.e. $n \in [9, \bar{n}]$) will find it optimal to lie by choosing $l = 9$ or $u = n - 9$, in order to avoid the fixed cost of filling out the address slip. $\bar{n}$ is defined such that $C = M(\bar{n} - 9)$, so that an enumerator matched with a firm of size $\bar{n}$ would be indifferent between misreporting ($l = 9$) and reporting truthfully ($l = \bar{n}$). For enumerators matched with firms of size $n > \bar{n}$, the cost of misreporting exceeds the cost of filling out the address slip, so they are better off bearing the address slip cost and reporting truthfully (i.e. setting $l = n$ or $u = 0$).

To summarize, we obtain the following relationship between reported and true employment:

$$l(n) = \begin{cases} n & if \quad n \in [n_{min}, 9) \\ 9 & if \quad n \in [9, \bar{n}] \\ n & if \quad n > \bar{n} \end{cases}$$

Given this mapping between reported and actual employment, the reported firm size density is given by:

$$\psi(l) = \begin{cases} \chi(n) & if \quad l \in [n_{\min}, 9) \\ \int_9^{\bar{n}} \chi(n)dn = \delta_e & if \quad l = 9 \\ 0 & if \quad l \in (9, \bar{n}] \\ \chi(n) & if \quad l \geq \bar{n} \end{cases}$$

In other words, the enumerator misreporting will cause the reported distribution to exhibit "bunching before the threshold as well as a "valley" after the threshold, even if neither phenomena exists in the true distribution. However, the reported distribution coincides with the true distribution before the threshold and for values far above the threshold. In other words, enumerator misreporting does not cause a downshift in the reported distribution in excess of the downshift in the true distribution and hence does not bias our estimate of τ.

firm of size 20 than a firm of size 200.

[10] As before we will only consider nonnegative values of u, since there will be no incentive to over-report firm size.

[11] The latter assumption is made only for simplicity of exposition.

[12] The other possibility is that $M(u) < C \ \ \forall\, u$, but this case is not very interesting and is clearly not borne out by the data (it would suggest that enumerators should *always* misreport firm size to be 9).

B.6 The Firm Size Distribution With Misreporting and Inattention

As we noted in Section 4.2, there is a significant discrepancy between the firm size distribution predicted by our model and that observed in the data. In the model, there should be many firms "bunched up" with sizes just below 10, and there should be a "valley" (i.e. *no* firms) reporting sizes just above 10. Yet, Figure 1 clearly shows that there are firms reporting sizes just above 10. In this section we account for this discrepancy.

Our explanation, related to those considered by Kleven and Waseem (2013), is that small firms tend to be inattentive to the regulatory threshold while large firms tend to be attentive. Attentive firms are aware of the regulations as well as the expected costs and benefits of misreporting, while inattentive firms are simply not aware of the relevant regulations - and hence do not bother to misreport their firm size. This explanation is based on the observation - itself the result of interviews conducted with a number of firms - that small firms are commonly unaware of regulatory details (including the size thresholds themselves) while large firms commonly expend considerable time and money in ensuring that they have correct information regarding the regulations (often by hiring accounting, legal and human resource departments within the firm). This difference is likely due to the fact that large firms cannot fly under the radar as easily and are much more likely to be audited and inspected by labor regulators (Almeida and Ronconi (2016)). It may also be related to the well documented fact that small firms tend to be managed by those with lower levels of human capital (La Porta and Shleifer (2014)) and are hence less likely to be knowledgable about the law.

The assumption that larger firms are more likely to be attentive can also be motivated theoretically. Imagine that managers must pay a fixed cost (which varies idiosyncratically across firms) in order to learn regulatory details - including the location of the thresholds. In practice this would involve hiring an accountant or attorney who is knowledgable about the text of labor regulations. Under the plausible assumption that the distribution of fixed costs does not vary with firm size, the fact that the benefits of adjusting employment in response to the threshold rise with size implies that all large firms will adjust while only some small firms will.

In what follows we will amend the theoretical model from Section 4.1 to include the assumption that a large fraction of firms are inattentive, but that this fraction goes to 0 at large firm sizes. More formally:

Assumption 1. *$\exists$ a given proportion $p(\alpha)$ of entrepreneurs that are attentive (i.e. they are aware of the size-based regulations, as well as the expected costs and benefits of misreporting) while $(1 - p(\alpha))$ of entrepreneurs are inattentive (i.e. they ignore or are unaware of the regulations* and *- therefore - they report their size truthfully). Furthermore, $p'(\alpha) > 0$ and $\lim_{\alpha \to \infty} p(\alpha) = 1$.*

Under this assumption, one can show that the theoretical firm size distribution will match the main features of the empirical density while still yielding minimally biased estimates of τ under our estimation procedure. To demonstrate this result, we proceed below by solving the problem that faces each type of firm in turn, beginning with the attentive firms. We will derive the firm size distribution for each type, and then put them together to determine the firm size distribution for the entire population of firms.

B.6.1 The Attentive Firms' Problem

The problem of the attentive firm is exactly as modeled in the paper, and thus the associated firm size distribution for attentive firms is also the same (Section 4.1). For clarity, we repeat the main steps of the derivation with functional form assumptions. Let the expected costs of misreporting be given by $M(n,l) = F * \frac{(n-l)^2}{n_{max}}$. Then, the firm's problem is the following:

$$\pi(\alpha) = \max_{n,l} \ \alpha n^{\theta} - wn - \tau wl * \mathbb{1}\{l > 9\} - F * \frac{(n-l)^2}{n_{max}}.$$

By combining solutions for n and l from the first order conditions with the distribution of managerial ability ($\phi(\alpha) = c_{\alpha}\alpha^{-\beta_{\alpha}}$), one can determine the distributions of true and reported firm size, $\chi(n)$ and $\psi(l)$:

$$\chi(n) = \begin{cases} c_{\alpha}(1-\theta)(\frac{\theta}{w})^{\frac{\beta-1}{1-\theta}} n^{-\beta} & if \quad n \in [n_{\min}, N) \\ \left|\frac{d\alpha_2^*(n)}{dn}\right| \phi(\alpha_2^*(n)) & if \quad n \in [N, n_2^*(\alpha_2)) \\ 0 & if \quad n \in [n_2^*(\alpha_2), n_3^*(\alpha_2)) \\ c_{\alpha}(1-\theta)(\frac{\theta}{w})^{\frac{\beta-1}{1-\theta}} (1+\tau)^{-\frac{\beta-1}{1-\theta}} n^{-\beta} & if \quad n \geq n_3^*(\alpha_2) \end{cases}$$

$$\psi(l) = \begin{cases} c_{\alpha}(1-\theta)(\frac{\theta}{w})^{\frac{\beta-1}{1-\theta}} l^{-\beta} & if \quad l \in [n_{\min}, N) \\ \int_{\alpha_1}^{\alpha_2} \phi(\alpha) d\alpha = \delta_l & if \quad l = N \\ 0 & if \quad l \in (N, l_3^*(\alpha_2)) \\ c_{\alpha}(1-\theta)(\frac{\theta}{w})^{\frac{\beta-1}{1-\theta}} (1+\tau)^{-\frac{\beta-1}{1-\theta}} [l + \frac{n_{max}}{2F} w\tau]^{-\beta} & if \quad l \geq l_3^*(\alpha_2) \end{cases}$$

where $\beta \equiv \theta + \beta_{\alpha} - \theta\beta_{\alpha}$. Then, the logged distributions of true and reported firm size, $log\chi(n)$ and $log\psi(l)$, are given by:

$$log\chi(n) = \begin{cases} log(A) - \beta log(n) & if \quad n \in [n_{\min}, 9) \\ log[\xi(n)] & if \quad n \in [9, n_m(\alpha_2)] \\ - & if \quad n \in (n_m(\alpha_2), n_t(\alpha_2)) \\ log(A) - \frac{\beta-1}{1-\theta} log(1+\tau) - \beta log(n) & if \quad n \geq n_t(\alpha_2) \end{cases}$$

$$log\psi(l) = \begin{cases} log(A) - \beta log(l) & if \quad l \in [l_{\min}, 9) \\ log(\delta_l) & if \quad l = 9 \\ - & if \quad n \in (9, l_t(\alpha_2)) \\ log(A) - \frac{\beta-1}{1-\theta} log(1+\tau) - \beta log(l + \frac{n_{max}}{2F} w\tau) & if \quad l \geq l_t(\alpha_2) \end{cases}$$

where $A \equiv c_{\alpha}(1-\theta)(\frac{\theta}{w})^{\frac{\beta-1}{1-\theta}}$ and $\xi(n) \equiv \left|\frac{d\alpha_2^*(n)}{dn}\right| \phi(\alpha_2^*(n))$. What these expressions show is that, for firms above the threshold, misreporting will be by a constant/fixed amount, and will thus be increasingly inconsequential in affecting the firm size distribution at larger and larger firm sizes. Formally, the difference between the reported firm size distribution, $\psi(x)$, and the true firm size distribution, $\chi(x)$, converges to 0 as $x \to \infty$.

B.6.2 The Inattentive Firms' Problem

Now let us consider the inattentive firm's problem. This problem is much simpler, because we model the inattentive firms as being entirely unaware of and unresponsive to the regulatory thresholds. In particular, because the firm is not attentive to the regulations, the issue of misreporting does not come up, so the reported density will be the same as the true density. Thus, the problem for such firms is as follows:

$$\pi(\alpha) = \max_n \alpha n^\theta - wn$$

The solution to this problem is straightforward: $n = \left[\frac{\theta}{w}\right]^{\frac{1}{1-\theta}} \alpha^{\frac{1}{1-\theta}}$, $\forall \alpha \in [\underline{\alpha}, \infty)$. Together with the distribution of managerial ability ($\phi(\alpha) = c_\alpha \alpha^{-\beta_\alpha}$), this implies that the firm size distribution of inattentive firms is given by the following expression:

$$\Gamma(n) = c_\alpha(1-\theta)(\frac{\theta}{w})^{\frac{\beta-1}{1-\theta}} n^{-\beta}, \quad \forall n \in [n_{min}, \infty)$$

Because there is no misreporting, the reported density is equivalent to the true density: $\Gamma(l) = \Gamma(n), \quad \forall l = n$. Thus, the logged version of both the true and reported densities is given by:

$log\Gamma(n) = log(c_\alpha(1-\theta)) - \frac{\beta-1}{1-\theta} log(\frac{w}{\theta}) - \beta log(n), \quad \forall n \in [n_{min}, \infty)$, and

$log\Gamma(l) = log(c_\alpha(1-\theta)) - \frac{\beta-1}{1-\theta} log(\frac{w}{\theta}) - \beta log(l), \quad \forall n \in [n_{min}, \infty)$

In other words, the reported firm size density is a simple - unbroken - power law at all firm sizes.

B.6.3 Combining the Densities for Attentive and Inattentive Firms

Now that we have derived the true and reported distributions for attentive and inattentive firms, we can combine them to generate the *complete reported* distribution for all firms. We rewrite the density (true and misreported) for attentive firms after collecting and renaming terms:

$$\chi(n) = \begin{cases} An^{-\beta} & if \quad n \in [n_{\min}, N) \\ \xi(n) & if \quad n \in [N, n_2^*(\alpha_2)) \\ 0 & if \quad n \in [n_2^*(\alpha_2), n_3^*(\alpha_2)) \\ A(1+\tau)^{-\frac{\beta-1}{1-\theta}} n^{-\beta} & if \quad n \geq n_3^*(\alpha_2) \end{cases}$$

$$\psi(l) = \begin{cases} Al^{-\beta} & if \quad l \in [n_{\min}, N) \\ \delta_l & if \quad l = N \\ 0 & if \quad l \in (N, l_3^*(\alpha_2)) \\ A(1+\tau)^{-\frac{\beta-1}{1-\theta}} [l + \frac{n_{max}}{2F} w\tau]^{-\beta} & if \quad l \geq l_3^*(\alpha_2) \end{cases}$$

where $A \equiv c_\alpha(1-\theta)(\frac{\theta}{w})^{\frac{\beta-1}{1-\theta}}$ and $\xi(n) \equiv \left|\frac{d\alpha_2^*(n)}{dn}\right| \phi(\alpha_2^*(n))$. The simplified density for inattentive firms is just:

$$\Gamma(n) = An^{-\beta}, \quad \forall n \in [n_{min}, \infty)$$

Given that some fraction ($p(\alpha)$) of the firms are attentive while the rest ($1 - p(\alpha)$) are inattentive, the complete distributions for true and reported firm size are each convex combinations of the true and reported distributions (respectively) for attentive and inattentive firms, where the weight of the distribution at a given point is given by the proportion of entrepreneurs that are either attentive or inattentive. In particular, the true distribution *for all firms* is given by: $\Omega(n(\alpha)) = p(\alpha)\chi(n(\alpha)) + (1-p(\alpha))\Gamma(n(\alpha))$, where n is written explicitly as a function of α. Substituting in our expressions for $\chi(n)$ and $\Gamma(n)$ from above, we get:

$$\Omega(n(\alpha)) = \begin{cases} An(\alpha)^{-\beta} & if \quad n(\alpha) \in [n_{\min}, N) \\ p(\alpha)\xi(n) + (1-p(\alpha))An(\alpha)^{-\beta} & if \quad n(\alpha) \in [N, n_2^*(\alpha_2)) \\ (1-p(\alpha))An(\alpha)^{-\beta} & if \quad n(\alpha) \in [n_2^*(\alpha_2), n_3^*(\alpha_2)) \\ A[p(\alpha)(1+\tau)^{-\frac{\beta-1}{1-\theta}} + (1-p(\alpha))]n(\alpha)^{-\beta} & if \quad n(\alpha) \geq n_3^*(\alpha_2) \end{cases}$$

We can do the same to generate the *reported* distribution for all firms, $\Lambda(l(\alpha)) = p(\alpha)\psi(l(\alpha)) + (1-p(\alpha))\Gamma(l(\alpha))$, or:

$$\Lambda(l(\alpha)) = \begin{cases} Al(\alpha)^{-\beta} & if \quad l(\alpha) \in [n_{\min}, N) \\ p\delta_l & if \quad l(\alpha) = N \\ (1-p(\alpha))Al(\alpha)^{-\beta} & if \quad l(\alpha) \in (N, l_3^*(\alpha_2)) \\ p(\alpha)A(1+\tau)^{-\frac{\beta-1}{1-\theta}}[l(\alpha) + \frac{n_{max}}{2F}w\tau]^{-\beta} + (1-p(\alpha))Al(\alpha)^{-\beta} & if \quad l(\alpha) \geq l_3^*(\alpha_2) \end{cases} \tag{2}$$

These expressions generate some different conclusions from the model without inattentive firms. One conclusion that is the same is that τ will again lead to a downshift in the true logged distribution at large firm sizes. However, the term which describes the downshift $(p(\alpha)(1+\tau)^{-\frac{\beta-1}{1-\theta}} + (1-p(\alpha)))$ is now a combination not only of τ, but also of the proportion of attentive ($p(\alpha)$) and inattentive firms ($1-p(\alpha)$). However, an implication of Assumption 1 is that $\exists\, \alpha_L$ *such that* $p(\alpha) \approx 1 \quad \forall\, \alpha > \alpha_L$. Then, the tails of the true and reported distributions are well approximated by the following expressions:

$$\Omega(n(\alpha)) = A[(1+\tau)^{-\frac{\beta-1}{1-\theta}})]n(\alpha)^{-\beta}, \quad \forall\, n(\alpha) > n(\alpha_L)$$

$$\Lambda(l(\alpha)) = A(1+\tau)^{-\frac{\beta-1}{1-\theta}}[l(\alpha) + \frac{n_{max}}{2F}w\tau]^{-\beta}, \quad \forall\, l(\alpha) > l(\alpha_L)$$

However, these are just the same as in the version of the model without inattention. Moreover, the expressions for the reported and true firm size distributions *at small (i.e.* $n <$

10*) firm sizes* also coincide with those of the model without inattention (because attentive and inattentive small firms behave in the same way). Thus, under these assumptions, our current procedure for estimating τ using the firm size distribution at large sizes (i.e. leaving out the middle of the distribution which is likely to impacted by both misreporting and now also inattention) allows us to estimate τ with little bias.

One final point is worth making: if $p \approx 0$ at small firm sizes, that would explain why there is not more bunching nor a very significant "valley" in the firm size distribution around 10. Thus, under the assumption that small firms are mostly inattentive, while large firms are mostly attentive, we can make sense of the relatively small observed distortions in the distribution around 10, while still being able to estimate the cost of the regulations on large firms.

C Full Results by State, Industry and Ownership Type for the 10-worker Threshold

Table 2: Estimates of τ by State

State	*Tau*	*Standard Error*
Bihar	.693	.302
Karnataka	.52	.156
Uttar Pradesh	.502	.254
Delhi	.427	.213
Tamil Nadu	.397	.154
Jharkhand	.388	.194
Madhya Pradesh	.379	.203
Maharashtra	.332	.107
Assam	.322	.345
Rajasthan	.32	.174
Orissa	.283	.139
Gujarat	.165	.151
West Bengal	.151	.071
Kerala	.138	.196
Punjab	.096	.158
Haryana	.007	.168
Andhra Pradesh	-.159	.053
Himachal Pradesh	-.165	.159

Note: This table presents estimates of regulatory costs faced by establishments that employ 10 or more workers, using the methodology described in Section 4. Standard errors generated using a clustered bootstrap procedure with 200 replications are presented in parentheses. Clustering is done at the 4 digit (NIC code) industry level, following GLV. Estimates are presented for the 18 largest states (by NSDP). Source: 2005 Economic Census of India.

Table 3: Estimates of τ by Industry

Industry	*Tau*	*Standard Error*
Wholesale and retail trade	.637	.094
Real estate, renting and business activities	.601	.158
Construction	.478	.549
Hotels and restaurants	.468	.222
Transport, storage and communications	.334	.209
Manufacturing	.268	.085
Other service activities	.264	.186
Health and social work	.076	.149
Mining and quarrying	-.042	.294
Financial intermediation	-.105	.074
Education	-.173	.15
Public administration and defence	-.311	.034
Electricity, gas and water supply	-.367	.145

Note: This table presents estimates of regulatory costs faced by establishments that employ 10 or more workers, using the methodology described in Section 4. Standard errors generated using a clustered bootstrap procedure with 200 replications are presented in parentheses. Clustering is done at the 4 digit (NIC code) industry level, following GLV. Estimates are presented for all major industry categories. Source: 2005 Economic Census of India.

Table 4: Estimates of τ by Ownership Type

Ownership Type	*Tau*	*Standard Error*
Unincorporated proprietary	.43	.059
Co-operative	-.007	.075
Non profit institution	-.04	.095
Unincorporated partnership	-.058	.053
Government and public sector undertaking	-.092	.128
Corporate financial	-.18	.055
Corporate non financial	-.197	.05

Note: This table presents estimates of regulatory costs faced by establishments that employ 10 or more workers, using the methodology described in Section 4. Standard errors generated using a clustered bootstrap procedure with 200 replications are presented in parentheses. Clustering is done at the 4 digit (NIC code) industry level, following GLV. Estimates are presented by ownership type of the establishment. Source: 2005 Economic Census of India.

D Robustness of τ estimates to choice of fixed effects

Table 5: Robustness of τ estimates to inclusion/exclusion of specific firm size fixed effects

Maximum size omitted	Include size 2 and 8	Omit size 8	Omit size 2	Omit size 2 and 8
18	0.390	0.361	0.386	0.349
	(0.077)	(0.081)	(0.089)	(0.081)
19	0.389	0.359	0.385	0.348
	(0.082)	(0.081)	(0.089)	(0.082)
20	0.388	0.358	0.384	0.347
	(0.082)	(0.075)	(0.086)	(0.084)
21	0.386	0.357	0.382	0.345
	(0.086)	(0.071)	(0.088)	(0.080)
22	0.385	0.356	0.381	0.344
	(0.083)	(0.080)	(0.088)	(0.075)
23	0.384	0.354	0.380	0.343
	(0.081)	(0.082)	(0.083)	(0.080)
24	0.382	0.352	0.378	0.341
	(0.077)	(0.079)	(0.082)	(0.088)
25	0.381	0.351	0.376	0.340
	(0.084)	(0.073)	(0.086)	(0.077)
26	0.379	0.350	0.375	0.338
	(0.077)	(0.076)	(0.084)	(0.075)
27	0.378	0.349	0.374	0.337
	(0.080)	(0.076)	(0.075)	(0.071)
28	0.377	0.348	0.373	0.336
	(0.076)	(0.070)	(0.079)	(0.076)
29	0.376	0.347	0.372	0.335
	(0.074)	(0.069)	(0.077)	(0.072)
30	0.375	0.346	0.371	0.334
	(0.077)	(0.070)	(0.074)	(0.077)
31	0.374	0.345	0.370	0.333
	(0.079)	(0.076)	(0.081)	(0.070)
32	0.373	0.344	0.369	0.332
	(0.079)	(0.074)	(0.073)	(0.074)
33	0.372	0.343	0.368	0.331
	(0.069)	(0.076)	(0.077)	(0.078)
34	0.371	0.342	0.367	0.331
	(0.072)	(0.070)	(0.075)	(0.074)
35	0.371	0.341	0.366	0.330
	(0.069)	(0.072)	(0.073)	(0.074)

Note: This table presents estimates of regulatory costs faced by establishments with 10 or more workers, using the methodology described in Section 4 with a bandwidth of 0.005. Standard errors generated using a clustered bootstrap procedure with 200 replications are presented in parentheses. Clustering is done at the 4 digit (NIC code) industry level, following Garicano, Lelarge, and Van Reenen (2016). Estimates are presented for a variety of choices for the largest firm size to omit from estimation by including a fixed effect for that size. For each choice of the largest firm size to omit, we show robustness to the choice of omitting firms of size 2, 8, or both from estimation. Source: 2005 Economic Census of India.

E Further Results Related to Exploration of Mechanisms

In the main body of the paper we reported the results of regressing τ against state-level differences in the statutory, procedural and administrative aspects of the regulations, as well against state-level differences in measures of corruption. In this section we provide some robustness tests related to the former analyses (see Tables 7 and 8, as well as Figures 1 and 2). We also provide some further tests which report the results of regressing τ against other measures of the labor environment. In particular, Table 6 reports the results of τ regressed against per capita measures of strikes, man-days lost to strikes, lockouts, man-days lost to lockouts and the percentage of registered factories that have been inspected. One might imagine that strikes and lockouts capture relevant features of the regulatory and labor environment,[13] but we do not find them to be robustly correlated with τ. We do find, echoing the results of Tables 4 and 7, a robust correlation between τ and the percentage of registered factories inspected.

Table 6: Tau vs Strikes and Lockouts

	(1) tau	(2) tau	(3) tau	(4) tau	(5) tau
strikes per capita	-0.0584				
	(0.208)				
mandays lost due to strikes per capita		-0.00607			
		(0.0771)			
lockouts per capita			0.0367		
			(0.0789)		
mandays lost due to lockouts per capita				0.0289	
				(0.0750)	
percent of factories inspected					0.736**
					(0.290)
log of net state domestic product pc	-0.398	-0.387	-0.407	-0.407	0.547
	(0.286)	(0.258)	(0.264)	(0.261)	(0.743)
Constant	4.085	3.946	4.132	4.138	-5.644
	(2.729)	(2.597)	(2.630)	(2.612)	(7.681)
Observations	18	17	18	18	10

Note: This table tests for correlations between our estimated regulatory costs (tau) and other miscellaneous measures of the labor environment. Robust standard errors are reported in parentheses. Observations are weighted by the inverse variance of tau and include only the 18 largest Indian States, as measured by NSDP. Sources: Indian Labour Year Book (2005).

[13] For example, some industrial regulations explicitly undermine or support the rights of parties to engage in strikes or lockouts.

Table 7: Tau vs Other Measures of Regulations

	(1) tau	(2) tau	(3) tau	(4) tau	(5) tau	(6) tau
Dougherty measure	-0.424*	-0.431*				
(all reforms)	(0.212)	(0.235)				
Dougherty measure			-0.549***	-0.652***		
(inspector reforms)			(0.170)	(0.150)		
Besley-Burgess					0.223	0.237
measure (regs)					(0.182)	(0.183)
log of net state		-0.463*		-0.527**		-0.518**
domestic product pc		(0.262)		(0.204)		(0.235)
share of privately		-0.0632		8.524		-12.80
owned establishments		(7.095)		(6.707)		(8.354)
Constant	0.203	4.945	0.288*	-1.923	0.00679	16.67*
	(0.222)	(6.800)	(0.149)	(6.529)	(0.292)	(7.798)
Observations	18	18	18	18	15	15

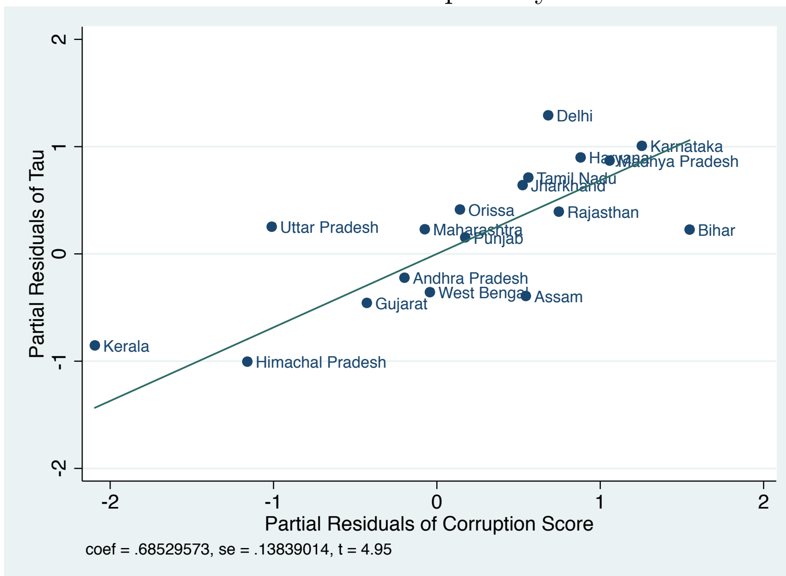
Note: This table tests for correlations between our estimated regulatory costs (tau) and other established measures of the regulatory environment from the previous literature. Robust standard errors are reported in parentheses. Observations are weighted by the inverse variance of tau and include only the 18 largest Indian States, as measured by NSDP. Sources: Dougherty(2009); Besley and Burgess(2004); RBI.

Table 8: Tau vs State Level Measures of Corruption

	(1) tau	(2) tau	(3) tau	(4) tau	(5) tau	(6) tau
TI Corruption Score	0.812**	0.806**	0.685***			
	(0.290)	(0.342)	(0.129)			
electricity losses				0.925***	0.948**	0.575***
				(0.310)	(0.326)	(0.190)
log of net state domestic product pc		-0.0667	-0.213		-0.219	-0.350**
		(0.338)	(0.285)		(0.131)	(0.133)
share of privately owned establishments		-2.323	6.335*		1.365	7.900
		(4.493)	(3.376)		(4.940)	(5.153)
Dougherty measure (inspection reforms)			-0.594***			-0.500***
			(0.0932)			(0.116)
Electricity available (GWH)					0.109	
					(0.134)	
Constant	0.334	3.075	-2.935	0.476**	1.365	-2.956
	(0.213)	(4.682)	(3.836)	(0.169)	(4.634)	(4.728)
Observations	18	18	18	18	18	18
Measure of Corruption	TI	TI	TI	TDLs	TDLs	TDLs

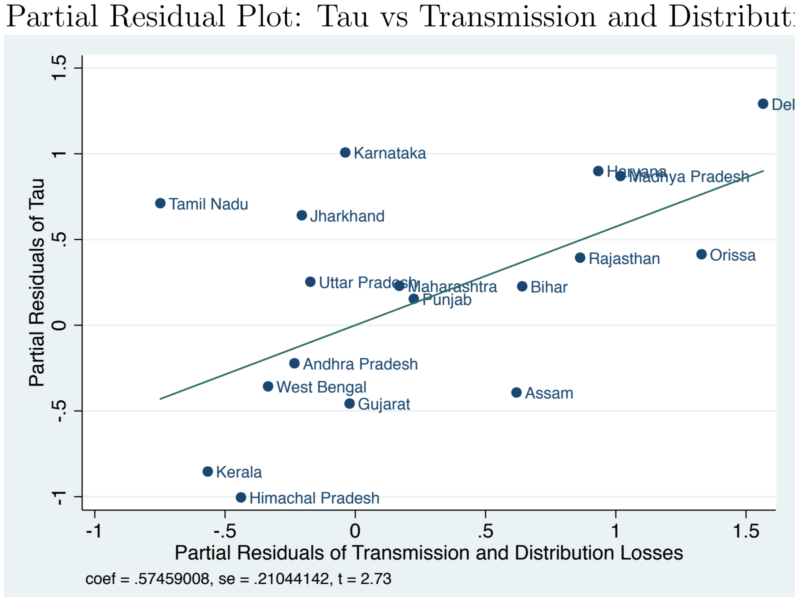
Note: This table reports the results of our estimated regulatory costs (tau) regressed against two different measures of corruption. Robust standard errors are reported in parentheses. Observations are weighted by the inverse variance of tau and include only the 18 largest Indian States, as measured by NSDP. Sources: Transparency International (2005); RBI; Dougherty(2009).

Figure 1: Partial Residual Plot: Tau vs Transparency International Corruption Score



Note: This figure is the graphical analogue of column 3 in Table 4. It depicts the relationship between the components of tau and the TI Corruption Score that are unexplained by the other covariates. Sources: Transparency International (2005); Dougherty(2009); RBI.

Figure 2: Partial Residual Plot: Tau vs Transmission and Distribution Losses



Note: This figure is the graphical analogue of column 6 in Table 4. It depicts the relationship between the components of tau and electricity transmission and distribution losses that are unexplained by the other covariates. Sources: Dougherty(2009); RBI.

E.1 τ and Corruption: State X Industry Analysis

In this portion of the Appendix, we explain our State X Industry analysis (described in Section 6.1) in more detail. The purpose of this analysis is to partially address concerns that the state-level correlations between τ and corruption lack exogenous variation and may be biased if our measures of corruption are correlated with omitted variables that also influence τ. To do so, we take advantage of State X Industry level heterogeneity as an additional source of variation. We use data from the World Bank's 2005 Firm Analysis and Competitiveness Survey of India (FACS) to create an industry level measure of the extent to which regulations are problematic, which we term "regulatory intensity". Specifically, Indian firms in the 2005 FACS were asked whether "regulations specific to [their] industry" were problematic for their "operation and growth". Averaging the firm-level responses by industry, we classify industries according to how likely businesses are to complain about *industry-specific* regulations. If regulations are especially costly due to corruption in their enforcement, then we would expect costs to be highest among those businesses in regulation-heavy industries *and* in states with high corruption. That is, we would expect the *interaction* between industry level "regulatory intensity" and state level corruption to be positive.

To test our hypothesis we generate our measures of τ at the State X Industry level[14] and regress those measures against interactions of state level corruption with industry level regulatory intensity. The results, shown in Table 9 with and without interaction terms, support our hypothesis. First, when excluding the interaction terms (columns 1 and 3), the main effects (state level corruption and industry level regulatory intensity) are significantly correlated with τ in the expected directions. When interaction terms are included (columns 2 and 4), their coefficients are also large and significant, suggesting that the presence of industry specific regulations is most costly when firms are located in a corrupt environment.

F Possible Consequences of τ

In Section 6 we argued that our estimated costs (τ) are mostly due, not only to the substance of the regulations themselves, but also to high levels of corruption. In this subsection we will indicate possible consequences of high values of τ. In what follows we use two distinct measures of τ: one which is created using all the establishments in a state, regardless of economic sector (τ) and another which is created using only the establishments engaged in manufacturing (τ_{manuf}).

Table 10 displays the results of employment growth in the manufacturing sector between 2010 and 2005 at the state level regressed against our two measures of labor market distortions (τ and τ_{manuf}) as well alternative measures (Dougherty and BB). For each of the four measures, we observe its performance as a predictor of future employment growth in *registered* manufacturing as well as *unregistered* manufacturing. Interestingly, in the regressions of employment growth in registered manufacturing against τ_{manuf}, the coefficient on τ_{manuf}

[14] Industries here are categorized according to their groupings in the World Bank Enterprise Surveys, which distinguishes 23 distinct industry categories. Examples include "auto components", "leather and leather products", and "food processing". We only generated τ for state X industry cells with a sufficient number of observations (in particular, for those with at least 40 observations in the size distribution), and were thus left with only 190 observations out of a possible 414 (23*18).

Table 9: Tau vs State Level Corruption Interacted with Industry Level "Regulatory Intensity"

	(1) tau	(2) tau	(3) tau	(4) tau
log of net state domestic product pc	-0.348***	-0.312***	-0.186***	-0.142***
	(0.0298)	(0.0311)	(0.0288)	(0.0298)
TI Corruption Score	0.0592***	0.143***		
	(0.0140)	(0.0291)		
electricity TDLs			0.226***	0.224***
			(0.0215)	(0.0206)
Regulatory Intensity	0.259***	0.314***	0.0937**	0.103***
	(0.0288)	(0.0328)	(0.0284)	(0.0274)
TI Corruption Score X Regulatory Intensity		0.160**		
		(0.0492)		
electricity TDLs X Regulatory Intensity				0.176***
				(0.0435)
Constant	-0.424***	-0.404***	-0.534***	-0.576***
	(0.00849)	(0.0103)	(0.0121)	(0.0156)
Observations	190	190	190	190

Note: This table reports the results of our estimated regulatory costs (tau) regressed against against state level corruption, industry level regulatory intensity, and their interaction. Robust standard errors are reported in parentheses. Observations are now at the state X industry level but are still weighted by the inverse variance of tau and include only the 18 largest Indian States, as measured by NSDP. Sources: Transparency International (2005); RBI; World Bank Firm Analysis and Competitiveness Survey of India (2005).

is negative and significant at the 5% level, while the coefficient for employment growth in *unregistered* manufacturing is positive and significant. This result makes sense: we should expect higher costs to negatively affect the sectors to which the costs apply - in this case the registered sector, since that is under the ambit of labor regulations while the unregistered sector is not.[15] If these correlations reflect a causal chain, it would mean that high levels of regulatory costs and corruption (as measured by τ) are pushing employment from the registered to the unregistered sector.

Also included in Table 10 are the results of employment growth in manufacturing regressed against the BB and Dougherty measures. Neither regressor has a coefficient that is statistically significant or of a meaningful magnitude.[16]

[15] It also makes sense that the coefficients on τ are insignificant, since τ is measured across all sectors and will be less pertinent to manufacturing performance than τ_{manuf}.

[16] One might argue that it is not quite fair to regress growth between 2010 and 2005 on a regressor that uses data from 1997, as is the case for the BB measure. However, we have duplicated these results using growth from 1997 to 2002 and the results are the same. Furthermore, the Besley Burgess measure from Aghion, Burgess, Redding, and Zilibotti (2008) should be the same in 2005 due to the lack of state level reforms between 1997 and 2005.

Table 10: Manufacturing Employment Growth (2005 - 2010) vs Tau and Other Measures

	(1) reg manuf	(2) unreg manuf	(3) reg manuf	(4) unreg manuf	(5) reg manuf	(6) unreg manuf	(7) reg manuf	(8) unreg manuf
tau	-0.0240	0.00197						
	(0.0176)	(0.0233)						
tau (manuf)			-0.0471**	0.0623**				
			(0.0217)	(0.0256)				
Besley-Burgess measure (regs)					-0.00525	0.00979		
					(0.00731)	(0.0142)		
Dougherty measure (all reforms)							0.0226	-0.0143
							(0.0130)	(0.0159)
log of net state domestic product pc	0.00312	0.0189	0.0107	0.0192	0.00413	0.0140	0.0212	0.0136
	(0.0178)	(0.0214)	(0.0145)	(0.0161)	(0.00863)	(0.0168)	(0.0154)	(0.0195)
share of employment in manufacturing	-0.393	0.00558	-0.708**	0.435	0.0194	-0.559	-0.515*	0.0525
	(0.258)	(0.329)	(0.258)	(0.325)	(0.186)	(0.362)	(0.245)	(0.323)
Constant	0.0969	-0.182	0.0372	-0.229	0.0209	-0.0675	-0.0861	-0.131
	(0.173)	(0.209)	(0.139)	(0.152)	(0.0825)	(0.160)	(0.147)	(0.182)
Observations	18	17	18	17	15	15	18	17

Note: This table reports the results of employment growth in the registered and unregistered manufacturing sectors against several measures of the regulatory environment, including our own estimated regulatory costs (tau). Robust standard errors are reported in parentheses. Observations are unweighted and include only the 18 largest Indian States, as measured by NSDP. Sources: Besley and Burgess (2004); Dougherty(2009); RBI.

G Collusionary vs Extortionary Corruption (i.e. Harassment Bribery)

The results of Section 6.1 documented a robust *positive* correlation between effective regulatory costs (τ) and corruption/poor governance. To explain this phenomenon, we distinguish between two types of corruption that could take place between corrupt inspectors and firms: collusion and extortion. In order to explain our conception of the difference between these two types of corruption, it is necessary to make a further distinction: between following the letter of the law and the spirit of the law. An honest inspector will require firms to follow the spirit of the law (that is, a reasonable interpretation of the law). A corrupt inspector will threaten firms with the maximum penalty possible if they have not followed the letter of the law (which may be a literal but "unreasonable" interpretation of the law), and then bargain over the surplus gained from not following through with the penalty to obtain a bribe.

If the costs of following the letter of the law - or the penalties that inspectors can threaten for *not* following the letter of the law - are similar or less than the cost of following the spirit of the law, then firms will bear lower costs when dealing with corrupt inspectors than with honest inspectors. If the cost of following the letter of the law - or the maximum penalty that can be threatened under the letter of the law - is much greater than the cost of following the spirit of the law, firms will bear higher costs when dealing with corrupt inspectors. We refer to the former case as "collusionary corruption" and the latter case as "extortionary corruption". Under an extortionary regime (that is, if the cost of following the letter of the law is relatively high), then greater levels of corruption (i.e. more corrupt inspectors) will be associated with greater effective regulatory costs (τ). In a collusionary regime, the opposite association should be observed. If we are willing to interpret the positive correlations in Section 6.1 as indicative of a *causal* relationship, then the results suggest we are under an extortionary regime.

This may not be difficult to believe, as the regulations which apply to firms with more than 10 workers appear so complex as to make it almost impossible (or prohibitively costly) for any firm to be fully in compliance with all aspects of the law as written. As mentioned in Section 2, many of the laws have components that are antiquated, arbitrary, contradictory and confusing. That the laws may be impossible to fully comply with is suggested by some of the anecdotes we provide in Appendix H and the descriptions of the excessive specificity of the regulations we provided in Section 2. In this case, a dishonest inspector can, at any time, choose to subject a firm under his jurisdiction to a penalty, which may include financial (e.g. fines) and/or non-financial elements (e.g. harassment, time needed to defend claims of violations, prison terms). One could think of the extent of the penalty as a function of state governance: properly functioning governments hire and motivate inspectors to pursue substantive violations rather than minor ones, while inspectors in corrupt or dysfunctional governments can get away with threatening to impose high penalties for even minor technical violations if a bribe is not paid (i.e. extortion). Then, firms located in states with more corrupt governments would be expected to pay higher effective regulatory costs, as suggested by the results of Section 6.1.

H Qualitative Evidence Regarding Harassment Bribery from "ipaidabribe.com"

"I am a small factory owner in Kirti Nagar Industrial Area. We follow almost all rules laid down by government for the welfare of workers. Now, even if we follow everything there is always somethings where we lack and which needs improvement. We have a factory inspector by the name of Mr. ——— (M: ———-). He comes to all the factories in our area, inspects them, find mistakes and then harass and blackmails us. According to him he can get our factories sealed. To avoid this, to save our time and to save the unnecessary paperwork we pay him every year. I have paid him twice in two years i.e. 10000 & 15000 and this is common with all factories. Please take a strict action against him so that he learns a lesson. I am sure he is not alone. All his colleagues are equally corrupt."

(Reported on August 11, 2014 from New Delhi, Delhi | Report #131791)

"During the routine labor verification process by the labor department at our office, we were advised by the consultant to pay the labor inspector a bribe to ensure that they don't keep calling us for needless paperwork."

(Reported on June 28, 2011 from Chennai, Tamil Nadu | Report #35064)

“The Labour Department requires a dozen odd registers to be maintained some of them which are totally outdated and pointless. E.g: Salary register, Attendance register, Leave register etc.

Our IT office has an electronic system that logs all entries/exits and leave taken. We have the records and offerred to provide it to them in a printout.

Salaries are paid electronically via bank transfer.

The officer declined and said it must be maintained in a manual register!

Finally an arrangement was made where we maintain a few records manually and the rest he would overlook.

Cost of arrangement Rs 1500 twice a year even if the officer shows up only once a year for the inspection!

He is supposed to inspect twice so expects to be paid even for the time he did not show up!” (Reported on October 13, 2010 from Chennai, Tamil Nadu | Report #44950)

“Well i had gone to renew my labour license and after all the running around in the bank and the department, the signing authority asked me to pay Rs.500 for signing. When asked why 500, i was told since there are 5 employees for Rs.100 each.” (Reported on December 31, 2010 from Hyderabad, Andhra Pradesh | Report #43509)

“... in my third visit i met one of office peon in Labour office he guided me for the bribe he also investigated and *advised me for bribe according to the number of Employees deployed on contract basis* and for this valueble suggestion he charged me Rs. 100. Again with full confidence i went to the ALCs desk and straight away i offered him the packet which was contains the amount of Bribe Rs. 3000/- ... He issued me the license after office hours...” (Reported on March 30, 2011 from Mumbai, Maharashtra | Report #39133)

“Applying for shop & establishment [registration] & procured all documents relating to the registration. Finally inspectors are asking Rs.1000 as a bribe. If any other notice received by the company for resolving that another Rs.2000 and above , it depends on the company” (Reported on March 28, 2014 from Bangalore, Karnataka | Report #99016)

“Officer name ————- . Mobile no. ——— He is asking for a bribe of 60,000 and is saying will issue a negative report under labour laws.” (Reported on January 24, 2014 from Gurgaon, Haryana | Report #83365)

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