

PRODUCING HIGHER QUALITY JOBS: ENFORCING MANDATED JOB BENEFITS IN BRAZILIAN CITIES BETWEEN 1996-2007

Rita Almeida¹ Pedro Carneiro² Renata Narita³

¹World Bank, IZA

²UCL, IFS, Cemmap

³University of Sao Paulo

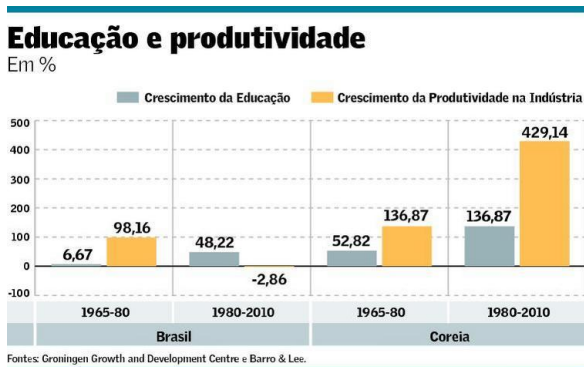
2015 ABCDE “Productivity, Growth, and the Law”
Mexico city, June 15-16

Motivation

- ▶ Many factors improved a lot in the past two decades in Brazil
 - ▶ poverty and inequality reduction
 - ▶ lower unemployment and informality
 - ▶ lower mortality rates
 - ▶ higher wages for the low skill workers
- ▶ However, productivity and growth has not accompanied social development
 - ▶ GDP to decline 1.5% next year, the biggest contraction since 1990

Motivation

- ▶ Education (access and attendance) did not improve productivity in Brazil



(Source: Naercio Menezes-Filho at Valor Economico newspaper, 05/22/15)

Motivation

- ▶ What went wrong?
- ▶ What raises productivity in Brazil? We don't know..
- ▶ Have labor market institutions played a role in decreasing productivity?

Main question

- ▶ Our paper looks at one aspect of institutions that can affect welfare and perhaps labor productivity
 - ▶ enforcement of labor regulations
- ▶ We do not model welfare, but we investigate what happens to vacancy characteristics with stricter enforcement:
 - ▶ Mandated benefits (registration, social security, transport subsidy, MW, max. working period)
 - ▶ Voluntary benefits (food subsidy and health insurance)
 - ▶ Wages

Literature

- ▶ **Compensating wage differentials:** firms tend to compensate higher cost of mandated benefits through adjustment in wages and other negotiable benefits
- ▶ **Wages respond inversely to changes in payroll taxes** [ex: Boeri, Helppie and Macis (2008), Kugler and Kugler (2002), Gruber (1997)]
- ▶ **Job quality associated with higher welfare:** Job attributes such as formal status, hours, firm's size, food, health care are linked with higher individual satisfaction [Madrigal and Pages, 2008; Boo et al, 2009; Maloney et al, 2007]
- ▶ **Stricter enforcement:** Almeida and Carneiro (2009) using Brazilian census 2000 found that enforcement increased formality and lowered wages in the formal sector

Our approach

- ▶ We use administrative data on enforcement of labor regulations by city and year 1996-2006
- ▶ We estimate the impact of stricter enforcement on
 - ▶ Employment composition and non-employment
 - ▶ Measures of job quality including: wages, mandated and voluntary benefits
- ▶ We want to understand the trade-offs btw provision of mandated and negotiable benefits

Labor Regulation in Brazil

- ▶ Registration (worker's card): entitles worker to employment protection
 - ▶ paid annual leave, maternity leave, severance, 44 hours/week, unemployment insurance and transportation benefits
- ▶ Severance Pay: 8.5% wage; worker entitled if fired for no reasons; it costs to the employers a 50% fine, a notice period of 1 month, and 2 hours/day to the worker to seek jobs
- ▶ Payroll tax: 20%
- ▶ Transportation benefit, varies by city and transport means
- ▶ Minimum wage: set by the federal gov. R\$ 112 in 1996 and R\$ 380 in 2007 (approx. 50% of mean wage)
- ▶ Other costs (e.g., sector contributions): Up to 6% of gross wage

Enforcement in Brazil

- ▶ Enforcement gained importance during the 90s:
 - ▶ From beginning 90s: to increase compliance with Federal Constitution/1988 which increased severance pay, payroll tax, paid leave, maternity leave and reduced weekly permitted working hours
 - ▶ After mid-90s: to reduce public deficit led the government to search for alternative ways to collect revenue
- ▶ This was motivated by the large payroll tax evasion (57% of workforce and significant non-compliance with severance pay by firms)

How does enforcement work?

- ▶ Inspections (and fines) are mostly to ensure compliance of firms with worker's registration, severance pay, MW, maximum working period/shifts
- ▶ Evasion of one of these dimensions accounts for approximately 62% of all fines issued in 2006
- ▶ Fines are significant:
 - ▶ fixed per worker (R\$ 403 ~1MW) for lack of registration, or
 - ▶ vary with firm's profitability, e.g. R\$40- 4,025 per worker for fines related to working period [average profit of a small firm is R\$ 600, ECINF 2003]
 - ▶ recidivism doubles the penalty

How does enforcement work?

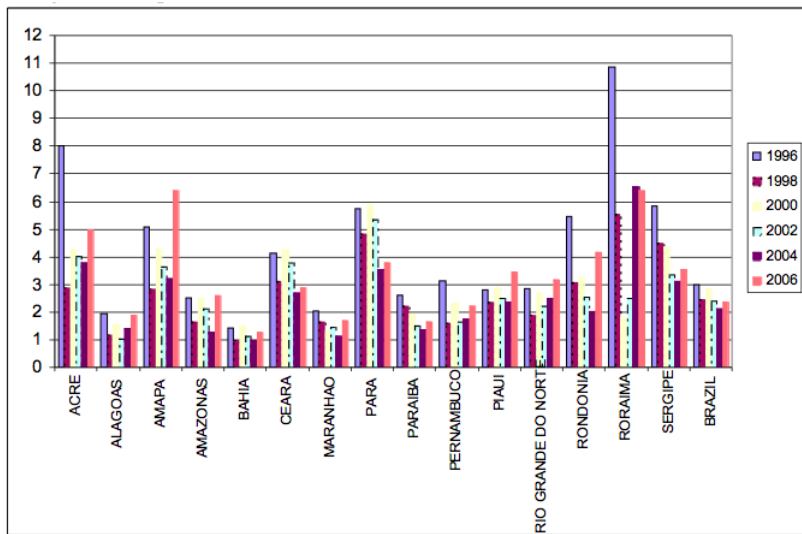
- ▶ An inspection may be triggered by a random firm audit, or by a report (often anonymous) of non-compliance
- ▶ Inspectors' wages are relatively high and tied to performance. Top 10% wages in Brazil's labour market. They have to rotate across offices
- ▶ Enforcement is decentralized at the district level

Data

- ▶ We construct a panel of cities using PNAD (Brazilian HH Survey) 1996-2007:
 - ▶ outcomes of interest (employment composition, nonemployment, wages, coverage of mandated and voluntary benefits)
 - ▶ demographic and socio-economic controls, by city and year
- ▶ We use administrative data from the Ministry of Labor, 1996-2006: total number of inspections by city and year

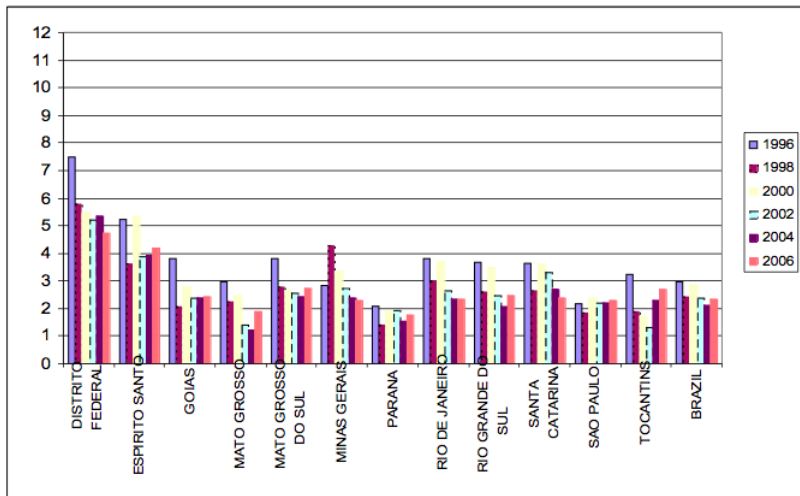
Large within country and time variation

- ▶ Labor Inspections/1,000 residents: North and Northeast States



Large within country and time variation

- ▶ Labor Inspections/1,000 residents: Center and Southern States



Baseline regression

$$Y_{it} = \alpha + \beta E_{it-1} + X'_{it-1} \delta + \eta_i + \mu_t + u_{it}$$

where $t = 1997, 1999, \dots, 2007$; E_{it-1} is log(inspections); X_{it-1} : mean education, mean age, population (log), share of urban pop., share of workers by industry and mean per capita income (log)

- ▶ Outcomes (Y_{it}):
 - ▶ Share of population 23-65:
 - ▶ By employment status (wage earner, self-employed, nonemployed, unpaid)
 - ▶ With and without benefits: mandated (social security, registration, transportation and maximum working hours) and voluntary benefits (housing, employer provided health insurance, education/child care and food)
 - ▶ Percentiles of log wages of workers with/out mandates and average

Other specifications

1. We consider changes over time in unobserved state-level variables possibly correlated with enforcement
 - ▶ We control for trends by state
2. We did find that enforcement (1996-2006) relates to some outcomes in the past (1980-1991)
 - ▶ We control for past trend in the outcomes constructed from census data 1980 and 1991

Enforcement and Employment Status

Dependent Variable:	Wage Earner	Self-Employed	Nonemployed	Unpaid	Other
	Fixed Effects				
Log # Inspections	0.019 (0.010)*	-0.016 (0.009)*	-0.005 (0.018)	0.020 (0.007)**	-0.008 (0.005)
	Fixed Effects + Past Trend in Outcomes by Municipality				
Log # Inspections	0.032 (0.012)***	-0.016 (0.010)	-0.020 (0.019)	0.016 (0.007)**	-0.011 (0.007)
Obs.	4834	4834	4834	4834	4834
Mean	0.370	0.187	0.281	0.076	0.086

Standard errors in parentheses are clustered by city. *** p<0.01, ** p<0.05, * p<0.1

- ▶ A 10% increase in inspections (in the city) raises of the share of wage earners (0.32pp), decreases the share of self-employed (-0.16pp, not sig.) and increases the share of unpaid workers (0.16pp).

Enforcement and Mandated Benefits

Dependent Variable:	Social Security		Registration		Minimum Wage	
	with	without	with	without	with	without
	Fixed Effects					
Log # Inspections	0.028 (0.010)***	-0.008 (0.007)	0.035 (0.010)***	-0.016 (0.009)*	0.038 (0.019)**	0.014 (0.005)***
	Fixed Effects + Past Trend in Outcomes by Municipality					
Log # Inspections	0.043 (0.012)***	-0.009 (0.008)	0.023 ^a (0.014)*	-0.015 ^a (0.010)	0.054 (0.017)***	0.011 (0.006)**
Obs.	4834	4834	4834	4834	4834	4834
Mean	0.265	0.105	0.252	0.119	0.329	0.039

^a This outcome is not available in the Censuses 1980, 1991. We use trends by state in this case.
Standard errors in parentheses are clustered by city. *** p<0.01, ** p<0.05, * p<0.1

- ▶ Stricter enforcement increases compliance with main mandated benefits
- ▶ No significant impact on other mandated benefits: transportation subsidy and maximum hours of work/week

Enforcement and Voluntary Benefits

Dep. Variable:	Housing		Food		Education/Child Care		Health	
	with	without	with	without	with	without	with	without
	Fixed Effects							
Log # Inspections	-0.006 (0.005)	0.026 (0.010)***	-0.033 (0.015)**	0.053 (0.018)***	0.002 (0.002)	0.017 (0.010)*	-0.030 (0.013)**	0.049 (0.016)**
	Fixed Effects + State-trends ^a							
Log # Inspections	-0.002 (0.005)	0.011 (0.012)	-0.033 (0.018)*	0.041 (0.020)**	0.002 (0.002)	0.006 (0.011)	-0.029 (0.015)**	0.037 (0.019)*
Obs.	4834	4834	4834	4834	4834	4834	4834	4834
Mean	0.029	0.341	0.123	0.247	0.009	0.362	0.066	0.304

^a There is no data on these outcomes in the Censuses 1980, 1991.

Standard errors in parentheses are clustered by city. *** p<0.01, ** p<0.05, * p<0.1

- ▶ Increase in inspections decreases the provision of voluntary benefits (food and employer-provided health insurance)

Enforcement and wages

(10th, 50th, 90th percentile log-wages)

Dependent Variable:	P10	Median	P90	P10	Median	P90
	With Social Security Coverage			Without Social Security Coverage		
	Fixed Effects					
Log # Inspections	0.005 (0.099)	-0.011 (0.080)	-0.359 (0.085)***	-0.111 (0.189)	0.207 (0.168)	0.243 (0.139)*
	Fixed Effects + Past Trend in Outcomes by Municipality					
Log # Inspections	-0.036 (0.097)	-0.087 (0.068)	-0.341*** (0.085)	-0.231 (0.152)	-0.077 (0.137)	0.195 (0.190)

^a There is no data on these outcomes in the Censuses 1980, 1991.

Standard errors in parentheses are clustered by city. *** p<0.01, ** p<0.05, * p<0.1

- ▶ The share of formal increased, this should have decreased wages in the informal sector, or
- ▶ CWD: Stricter enforcement increases the cost of providing mandated benefits; decreases wages for workers with mandated benefits and increase for workers without it
- ▶ Cannot decrease the lowest wages because of MW: tends to affect most high rather than low paid workers

Conclusion

- ▶ Brazil has a heavily regulated labour market, enforcement is likely important
- ▶ With stricter enforcement, CWD theory predicts firms try to avoid compliance and/or adjust wages and voluntary benefits – that may be more valued by workers and can be related to worker productivity
- ▶ **Our results for Brazil show that stricter enforcement increases compliance with mandated benefits**
- ▶ **Enforcement does not affect employment but increases the fraction of unpaid workers**
- ▶ **Enforcement reduces provision of negotiable benefits (wages of high skill workers, food benefits, and employer-provided health)**
- ▶ Effects on total welfare depend on the valuation and costs of provision of each benefit (agenda)