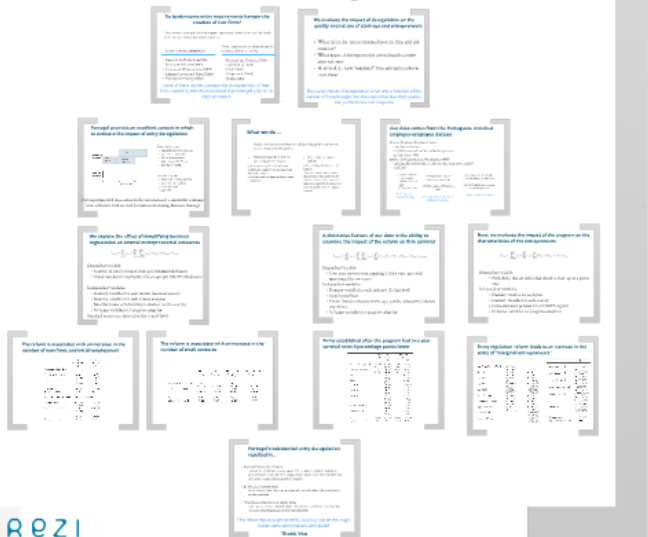


Do Entry Regulations Deter Entrepreneurship and Job Creation? Evidence from Recent Reforms in Portugal



My Research Portfolio

My research focuses on identifying the barriers/ constraints to entrepreneurial activity and understanding how public policies should be crafted to foster high-growth entrepreneurial firms. In addition, I am also interested in evaluating the impact of international trade, more specifically the evaluating the impact of low-wage competitors.

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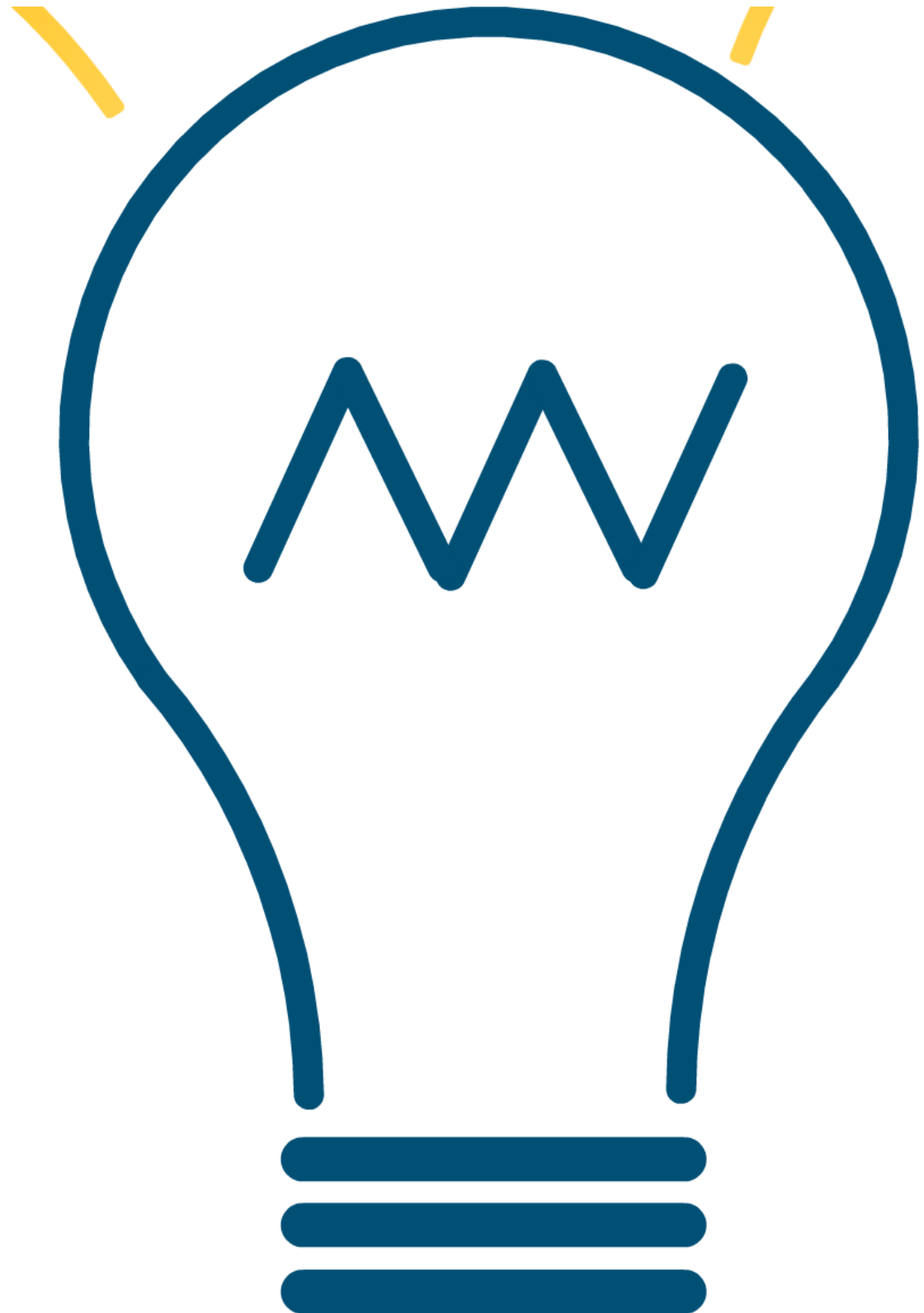
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International Trade

How do Low-Wage Competitors
Affect Employment and Firms in the
Developed Countries?

International Ventures

Policies to Exports

- What drives new ventures to export instead of growing nationally?
- What are the strategies implemented by new ventures?

ly to succeed:
ubators and scientific

ENTREPRENEURSHIP

What Constraints Entrepreneurial
Activity?

Lack of Capital

Policies to Financial Capital

- Does the initial funds raised by the new ventures affect their survival and growth prospects? Are new ventures financial constrained?
- Does changing the minimum level of required capital affect firm entry and survival?
- Did the current financial crisis affect new ventures' financial structure?

Lack of Resources and Specific Human Capital

Policies to Create their Own Jobs, Incubators and Science Parks

- Should the governments provide incentives to unemployed individuals? Within previously unemployed individuals, which start-ups and founders are more likely to succeed?
- What is the role of incubators and scientific parks?



Lack of General Human Capital

Policies to Education

- What are the role played by entrepreneurial courses (MBA, masters and undergraduate courses) in regional development ?
- Which courses should be privileged in the universities to promote more firm formation and job creation?





Regulations and Taxes

Policies to Entry and Exist Regulations and Corporate Taxes

- Should the governments reduce the levels of entry/ exit regulations? What effect do these reforms have on firm and job creation?
- Does reducing corporates taxes increase firm entry? What are the impact of taxes on regional economics?

Do Entry Regulations Deter Entrepreneurship and Job Creation? Evidence from Recent Reforms in Portugal

Do burdensome entry requirements hamper the creation of new firms?

Two streams of empirical work suggest that entry barriers are associated with reduced job creation and firm formation

Cross-country comparisons

- Djankov, La Porta, Lopez-De-Silanes and Shleifer (2002)
- Ciccone and Papaioannou (2007)
- Klapper, Laeven and Rajan (2006)
- Difficult inference problem

Time-, region and/or industry-specific variation within a country

- Bertrand and Kramarz (2002)
- Aghion et al. (2008)
- Ciarri (2007)
- Klapan et al. (2009)
- Bruhn (2008)

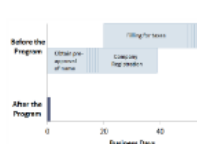
None of these studies compare the characteristics of new firms created by the reform to those that emerged prior to its implementation

We evaluate the impact of deregulation on the quality and nature of start-ups and entrepreneurs

- What effect do entry reforms have on firm and job creation?
- What types of entrepreneurs are induced to enter after reform?
- How well do new "marginal" firm entrants perform over time?

The social impact of deregulation is not only a function of the number of firms brought into the market but also their quality, size, performance and longevity

Portugal provides an excellent context in which to evaluate the impact of entry deregulation



Before the Program:

- visit different public agencies
- complete 13 procedures
- fill out 86 documents
- wait between 54 / 78 days
- pay almost 2,000€.

After the Program:

- single visit to one-stop shop
- complete 7 procedures
- finish in 1 hour

What we do ...

- 1 Develop a model to better frame the effects of deregulation reforms on several entrepreneurial outcomes
- 2 Business Registration Reform - On the Spot Firm Program
 - a) different time periods (2005 - 2009)
 - b) 448 total counties (164 one-stop shops - 448 total counties)
 - c) applies to private firms in a broad range of industries
- 3 Use a unique Portuguese database
 - a) detailed information about the founder
 - b) match founders with venture characteristics (size and survival)
 - c) use a difference-in-differences approach to quantify the impact of entry deregulation in Portuguese

Our data comes from the Portuguese matched employer-employee dataset

Matched Employer-Employee Dataset

- mandatory database
- 227,000 firms and 2 million individuals per year
- period: 1986 - 2008
- Institute of Registration and Notarization (IRN)
- opening date and location of each one-stop shop between 2005 and 2009

• eligible industries
• firms founded between 2009 and 2008
• 177,600 new firms

• identify at least 1 founder
• founders with age 18-60
• 139,848 founders of 74,516 firms

• 30% sample of all individuals
• focus founders characteristics
• 5,071,627 individuals, of whom 11,000 are founders

Do burdensome entry requirements hamper the creation of new firms?

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- Bertrand and Kramarz (2002)
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None of these studies compare the characteristics of new firms created by the reform to those that emerged prior to its implementation

We evaluate the impact of deregulation on the quality and nature of start-ups and entrepreneurs

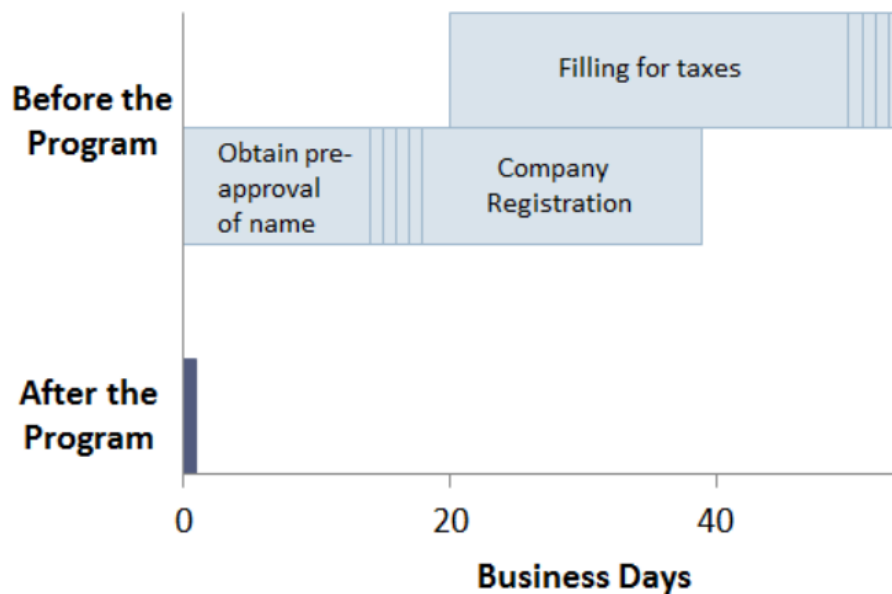
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The social impact of deregulation is not only a function of the number of firms brought into the market but also their quality, size, performance and longevity

What we do ...

- 1 Develop a model to better frame the effects of deregulation reforms on several entrepreneurial outcomes
- 2 Business Registration Reform - On the Spot Firm Program
 - a) different time periods (2005 -2009)
 - a) different counties (164 one-stop shops - 44% total counties)
 - c) applies to private firms in a broad range of industries
- 3 Use a unique Portuguese database
 - a) detailed information about the founder
 - b) match founders with venture characteristics (size and survival)
 - c) use a difference-in-differences approach to quantify the impact of entry deregulation in Portuguese counties

Portugal provides an excellent context in which to evaluate the impact of entry deregulation



Before the Program :

- visit different public agencies
- complete 11 procedures
- fill out 20 documents
- wait between 54 /78 days
- pay almost 2,000€.

After the Program:

- single visit to one-stop shop
- complete 7 procedures.
- finish in 1 hour
- pay 360€

Portugal improved its position in the international competitive rankings (moved from 113rd to 33rd position in the Doing Business Raking)

Our data comes from the Portuguese matched employer-employee dataset

Matched Employer-Employee Dataset

- mandatory database
- 227,000 firms and 2 million individuals per year
- period: 1986 – 2008

Institute of Registration and Notarization (IRN)

- opening date and location of each one-stop shop between 2005 and 2009

- eligible industries
 - firms founded between 2000 and 2008
- 177,595 new firms

Firm Entry, Job
Creation and Size

- identify at least 1 founder
- founders with age 20-60

139,868 founders of 94,586 new firms

Characteristics of New Firms
(Start-ups Survival)

- 30% sample of all individuals
- Insert founders characteristics

5,071,627 individuals, of whom
33,958 entrepreneurs

Type of Entrepreneurs

We explore the effect of simplifying business registration on several entrepreneurial outcomes

$$Y_{cmy} = \sum_{m=1}^{12} \alpha_m + \sum_{c=1}^{308} \sum_{y=2000}^{2008} \nu_{cy} + \delta I_{my} + \theta Z_{cmy} + \epsilon_{cmy}$$

Dependent variable:

- Number of newly formed firms per 100,000 inhabitants
- Initial number of employees of start-ups per 100,000 inhabitants

Independent variables:

- Dummy variables for each month (seasonal effects)
- Dummy variables for each county and year
- Monthly index of industrial production for the country
- Indicator variables for program adoption

Standard errors are clustered at the county level

The reform is associated with an increase in the number of new firms and initial employment

	County-Year Fixed Effects	Quadratic Trend
	(1)	(2)
Panel A. Firm Entry		
One-Stop Shop ($Z = 1$)	2.081*** (0.643)	1.834*** (0.509)
Econ. Activity Index	0.016 (0.033)	0.292*** (0.030)
Observations	32,648	32,648
Adjusted R-squared	0.300	0.265
Panel B. Job Creation - Initial Employment		
One-Stop Shop ($Z=1$)	6.704** (3.365)	4.975** (2.466)
Econ. Activity Index	-0.030 (0.172)	1.420*** (0.138)
Observations	32,648	32,648
Adjusted R-squared	0.258	0.214

The reform is associated with an increase in the number of small ventures

	One Employee	Two Employees	Three to Five Employees	More than Five Employees
	(1)	(2)	(3)	(4)
One-Stop Shop ($Z = 1$)	0.568 (0.424)	0.592** (0.240)	0.630** (0.261)	0.276 (0.211)
Econ. Activity Index	-0.018 (0.020)	0.039** (0.015)	0.015 (0.018)	-0.020* (0.011)
Observations	32,648	32,648	32,648	32,648
Adjusted R-squared	0.122	0.109	0.173	0.180

A distinctive feature of our data is the ability to examine the impact of the reform on firm survival

$$S_{iflcm_y} = \sum_{m=1}^{12} \alpha_m + \sum_{c=1}^{308} \sum_{y=2000}^{2008} \nu_{cy} + \sum_{l=1}^{29} \lambda_l + \omega S_f + \tau X_i + \theta Z_{cm_y} + \delta I_{m_y} + \epsilon_{iflcm_y},$$

Dependent variable:

- Two-year survival rate, equaling 1 if the start-up is still operating after two years

Independent variables:

- Dummy variable for each industry (2-digit level)
- Firm's initial size
- Vector founder characteristics: age, gender, education, industry experience
- Indicator variables for program adoption

Firms established after the program had two year survival rates 4 percentage points lower

	County-Year Fixed Effects		Quadratic Trend	
	(1)	(2)	(3)	(4)
One-Stop Shop ($Z = 1$)	-0.041** (0.020)	-0.044** (0.021)	-0.030* (0.015)	-0.026* (0.015)
Econ. Activity Index	-0.000 (0.001)	0.000 (0.001)	-0.000 (0.001)	0.000 (0.001)
Ind		0.015*** (0.003)		0.016*** (0.003)
Gender		0.010*** (0.002)		0.009*** (0.002)
Age 30-39		0.028*** (0.003)		0.029*** (0.003)
Age 40-40		0.033*** (0.003)		0.033*** (0.003)
Age 50-60		0.042*** (0.004)		0.042*** (0.004)
Low education		0.006* (0.003)		0.005 (0.003)
Medium education		0.009** (0.005)		0.007 (0.004)
High education		0.048*** (0.005)		0.045*** (0.005)
Observations	118,193	112,123	118,193	112,123
Adjusted R-squared	0.035	0.038	0.024	0.028

Next, we evaluate the impact of the program on the characteristics of the entrepreneurs

$$E_{icy} = \sum_{y=2000}^{2008} \beta_y + \sum_{c=1}^{308} \gamma_c + \sum_{n=1}^{30} \delta G_{ny} + \theta Z_{cy} + \tau X_i + \epsilon_{icy}$$

Dependent variable:

- Probability that an individual founds a start-up in a given year

Independent variables:

- Dummy variable for each year
- Dummy variable for each county
- Gross domestic product for 30 NUTS regions
- Indicator variables for program adoption

Entry regulation reform leads to an increase in the entry of “marginal entrepreneurs”

	(1)	(2)		(2)
One-Stop Shop ($Z = 1$)	0.000623** (0.000307)		(Age 40-49) $\times Z$	0.000582** (0.000269)
Gender	0.00358*** (0.000310)	0.00379*** (0.000285)	(Age 50-60) $\times Z$	0.00114*** (0.000379)
Age 30-39	0.00213*** (0.000186)	0.00204*** (0.000210)	(Low educ) $\times Z$	0.000132 (0.000195)
Age 40-49	0.00142*** (0.000163)	0.00126*** (0.000208)	(Medium educ) $\times Z$	-0.000178 (0.000160)
Age 50-60	0.000206 (0.000179)	-0.000121 (0.000228)	(High educ) $\times Z$	-0.000461*** (0.000168)
Low education	0.00240*** (0.000239)	0.00235*** (0.000265)	Gdp	3.33e-07*** (8.82e-08)
Medium education	0.00580*** (0.000629)	0.00590*** (0.000594)	Constant	-0.00964*** (0.000431)
High education	0.00877*** (0.000777)	0.00926*** (0.000747)	Observations	5071627
(Gender) $\times Z$		-0.000790*** (0.000246)	Adjusted R-squared	0.003
(Age 30-39) $\times Z$		0.000368 (0.000243)		

Portugal's substantial entry deregulation resulted in...

- Increased Firm and Job Creation
 - increase in the number of start-ups and initial jobs in eligible industries by approximately 17.2% and 21.7%, respectively. After 2 years, there would 4,500 new firms creating approximately 17,500 jobs
- By “Marginal” Entrepreneurs
 - the increase is driven by entrepreneurs who are relatively older, more female and less educated
- Who Created Relatively Low Quality Firms
 - start-ups created are relatively smaller, less likely to survive in their first two years and created primarily in low-tech industries

This reform has brought benefits, but may not be the magic bullet some policymakers anticipated

Thank You

e policymakers a

Thank You

