



# LOCAL INFRASTRUCTURE INVESTMENT AND THE PRIVATE SECTOR: EVIDENCE FROM A RANDOMIZED TRIAL

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# A RANDOMIZED CONTROL TRIAL: INFRASTRUCTURE AND GROWTH

- Urban development is a key driver of the development of the modern state (Romer, 2009)
- **The nature of urbanization drives the composition of firms** (Glaeser, Luca & Moszkowski, 2020): Public infrastructure investment is a key policy lever to influence the dynamics of firm productivity
- We are the first to be able to connect **randomized variation in local infrastructure investment with data on the growth of private-sector firms**
- We follow an experimental \$67m infrastructure investment in 2008-2010 in urban Mexican neighborhoods: “Programa Hábitat”
- We study the effects of the shift in urban environment induced by this program on business activity, using business censuses conducted in 2008, 2013 and 2018



Main regression results  
Summarized regression table - Firm level - Values in levels  
Sample: Existing firms in endline, incl. missing in baseline

<b>Specification:</b>							
$y_T = \alpha + \beta * Habitat + \phi * \bar{y}_{2008}^{polygon} + MunFE + \epsilon$							
		All sectors		Manufacturing		Trade and Services	
Dependent variable	2013	2018	2013	2018	2013	2018	
Revenue	10.047 (6.135) <i>210.073</i>	22.427** (11.146) <i>299.583</i>	4.774 (12.858) <i>260.023</i>	2.294 (18.024) <i>330.230</i>	10.758* (6.380) <i>203.091</i>	24.951** (12.362) <i>295.094</i>	
Capital stock	5.177 (4.864) <i>81.333</i>	12.158** (4.890) <i>79.509</i>	-13.094 (10.991) <i>139.372</i>	-7.194 (9.825) <i>112.111</i>	8.078* (4.690) <i>73.083</i>	15.431*** (4.808) <i>74.485</i>	
Paid workers	0.055*** (0.020) <i>1.354</i>	0.023 (0.027) <i>1.544</i>	0.106 (0.067) <i>1.870</i>	-0.027 (0.082) <i>2.184</i>	0.050** (0.021) <i>1.282</i>	0.030 (0.027) <i>1.455</i>	
Wage bill	2.736*** (0.766) <i>13.656</i>	2.327* (1.298) <i>22.763</i>	4.428 (3.043) <i>37.785</i>	-1.658 (3.634) <i>52.678</i>	2.515*** (0.782) <i>10.276</i>	2.907** (1.344) <i>18.628</i>	
Observations	[44,200]	[50,869]	[5,365]	[6,072]	[38,791]	[44,750]	

This table shows the value of coefficient  $\beta$  described in the specification. Each coefficient denotes a different regression. Standard errors clustered by *Hábitat* polygon shown in parenthesis.

Values in square brackets show the number of observations in the regressions. Mean value of control group in italics.

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## GROWTH

- Residential infrastructure investment has substantial effects on private sector dynamics and equilibrium firm characteristics
  - I. Wages jump in 2013, necessary to compensate for rent increases, but number of workers also increases
  - II. Impacts on business investment and profitability grow over time. By 2018 value added/revenues up by 7% in treatment areas
  - III. Firm benefits are concentrated in the service sector
  - IV. Overall treatment effects mask substantial heterogeneity: more firm death and creation of more productive new firms in treatment; productive firms grow faster
  - V. Effect is not a temporary re-allocation even with highly localized investments

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# GOVERNMENT CAN SHIFT THE LOCAL ECONOMY THROUGH INFRASTRUCTURE

- We show that governments have a tool to kick-start the process of private sector productivity enhancement through infrastructure
- Despite only residential infrastructure investments, private sector firms
  - Hire more (so pay more payroll taxes)
  - Make higher profits (so pay more VAT)
  - Are more likely to formalize
- Implication: infrastructure investment is a tool through which the public sector can drive sustainable increases in private-sector efficiency
- Results suggest that infrastructure evaluations that focus on impacts on residential property values may under-estimate long-term benefits