

Purchasing Prosperity

The Economics of Government Procurement

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Why is government procurement important?

Why is government procurement important?

Definition and relevant numbers

- Definition by the OECD

“All purchases by governments of goods, services, and works”

1. Accounts for a large fraction of economic activity
 - ~ **5% - 20% GDP** depending on the country and year
2. Spreads over the whole economy
 - Governments are **active buyers in most industries**
3. A significant fraction of formal private firms involved (source: ESWB)
 - % **firms that bid** for at least one government contract in the last year ~ **15% on average**

Why is government procurement important?

Definition and relevant numbers

4. Perceived as a powerful policy tool

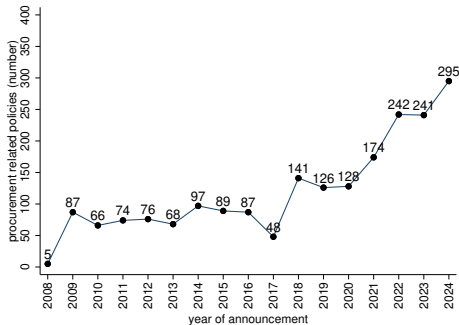
- “Efficient GP is **crucial** for solving many of the **key policy challenges** that the EU is facing...
...the fight against **corruption, market access for SMEs,...**” *European Commission (2017)*.
- “**Halting the waste (in public procurement) could free up at least \$1 trillion a year** to put economies on a path toward green, resilient, and inclusive development.”, *The hidden \$1 trillion: Halting waste in public procurement*, Gill (2022)
- “As we rebuild America’s infrastructure, we want **federal highway projects** to use **domestically manufactured products** that create good-paying jobs and **promote private sector investment and small business** opportunity”, US Transportation Secretary (2025)

Why is government procurement important?

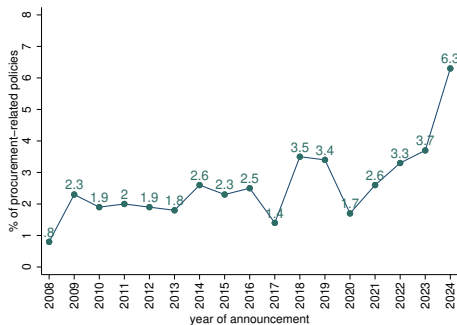
Definition and relevant numbers

5. Increasing relevance over time (from [Global Trade Alert \(GTA\)](#)), inspired by Juhász, et al. (2024)

* GTA includes all types of policies: [Anti dumping](#), [financial grants](#), [subsidies](#), [tariffs](#), etc.



(a) Number of procurement-related policies



(b) Share (%) of procurement-related policies

Plan for the talk

Plan for the talk

- Examples of procurement policies
- Focus on a particular thought experiment
- A general conceptual framework
- Two applications
- Final remarks

Examples of procurement policies

Examples of procurement policies

- **“Buy local/domestic”**
 - E.g.: Buy American, US: 20-30% bid preference margin for domestic firms
 - Similar policies in Uganda, Kenya, China, Canada, etc.
- **“Buy (less) local/domestic”**
 - E.g.: “Procurement single market in the EU”: harmonized rules + equal treatment
- **“Buy small”**
 - E.g.: Minimum 40% budget reservation for SMEs (Indonesia)
 - Similar policies in USA, Perú, etc.
- Others: “Buy green”, “Buy from minorities”, “Reduce waste/corruption”

Thought experiment

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- Imagine a government **changes the composition of firms** from which it buys
(keeping expenditure unchanged)

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Thought experiment

- Imagine a government **changes the composition of firms** from which it buys
(keeping expenditure unchanged)
 - E.g., a policy promoting small firms' participation
- **Q:** What is the impact of the policy on aggregate outcomes?
 - Identify channels through which the policy generates positive effect
 - Identify channels through which the policy generates negative effects
 - Quantify the trade-off

Conceptual framework

Conceptual framework

- Governments = final producers of public services
 - Using inputs, they produce health care, education, safety, etc
 - In its role as final producer, governments should
 - choose the set of suppliers to minimize its cost of producing (given its budget constraint)
 - However, governments may have additional objectives
 - Fix an economic distortion that affects private sector performance (e.g., financial constraints, demand constraints)
 - Boost local economic activity (create local jobs, increase tax collection, etc)
- Govts. may be willing to “distort” their supplier choices to tackle these additional objectives (spend more on potentially less efficient producers)
- Trade-off!: **private sector performance VS. governments’ efficiency**

Conceptual framework

Government → final producer

$$Y_g = F(m_1, m_2, \dots, m_G)$$

Government's Suppliers

$$\{f_1, f_2, \dots, f_G\}$$

Conceptual framework

Government → final producer

$$Y_g = F(m_1, m_2, \dots, m_G)$$

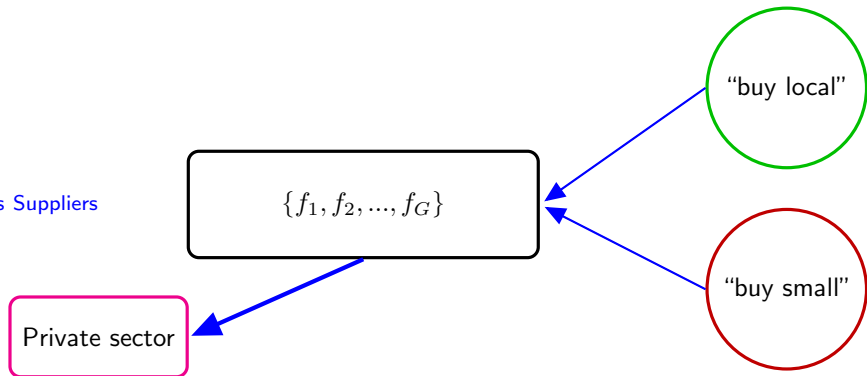
Government's Suppliers

$$\{f_1, f_2, \dots, f_G\}$$

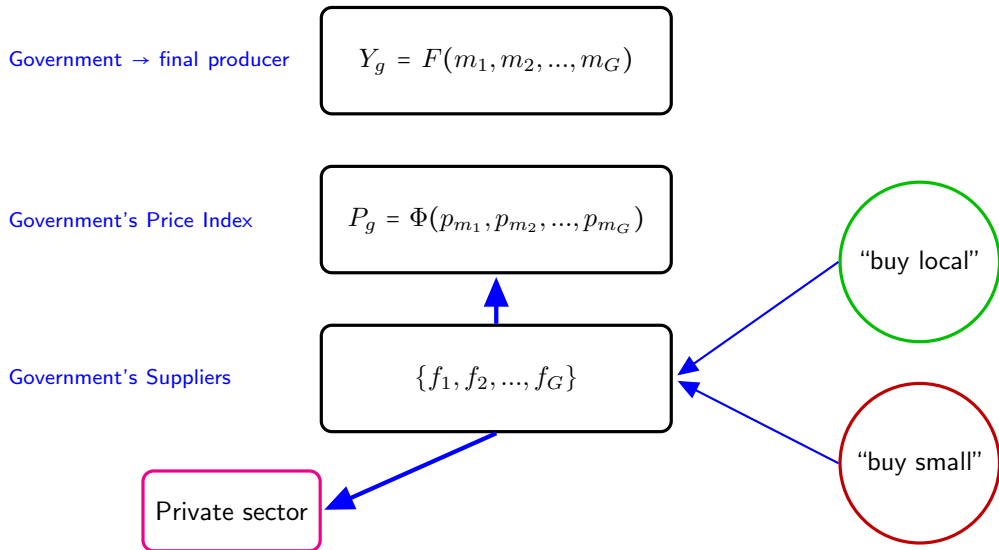
Private sector

“buy local”

“buy small”



Conceptual framework



The remaining of this talk

- Apply this general framework to specific research questions
 1. What are the **aggregate effects of “buy small” policies**?
 - Based on work w/ diGiovanni, Jeenas, Moral-Benito, Pijoan-Mas ([link](#))
 2. Are **governments “locally-biased” in the EU**? What are the **resulting effects** on their efficiency?
 - Based on work w/ Marta Santamaría ([link](#))
- Common ingredients
 - Granular data on **procurement at the transaction level**
 - **Micro evidence** on procurement patterns (from sellers' and buyers' side)
 - Structural model to go **from micro to macro** and run counterfactuals

Buy Small

Buy Small

Context

- Public procurement regulation in Spain under the EU procurement system
- Long debate on [whether the EU should adopt “reservation” or “bid preference” for SMEs](#)
- Most recent Directive 2014/24/EU provides lots of encouragement...

“...contracting authorities should be encouraged to divide large contracts into lots.”

- BUT [no explicit rule to favor SMEs](#) for government agencies

Buy Small

Private sector: firm-dynamics framework + financial frictions

Private sector

◇ Technology

- Stochastic differences in productivity across firms
- Have access to a CRS technology ($y = sk$)

◇ Demand

- All of them sell to private sector consumers (R_p)
- Can invest to become a government supplier (R_g)

◇ Finance

- Firms can borrow and accumulate net-worth (a)
- Borrowing is limited by firms' net-worth and revenue

$$k \leq \phi_a a + \phi_p R_p + \phi_g R_g$$

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Impact of financial frictions/the government

Impact of financial frictions

- High productivity (s) firms with low levels of net-worth (a) are financially constrained
 - E.g., productive young firms who have not had time to save enough
 - These firms have a **too low** k and **too high** $MRPK$
- Aggregate K and TFP_p too low \Rightarrow GDP loss

The government

- Produces a final public good using intermediate inputs produced by private firms
- Has access to policy instruments to affect procurement outcomes
 - E.g., making relatively more/less costly for small firms to obtain contracts

Buy Small

Thought experiment and trade-off

- **Q:** What if the government buys more from small firms? (keeping expenditure unchanged)

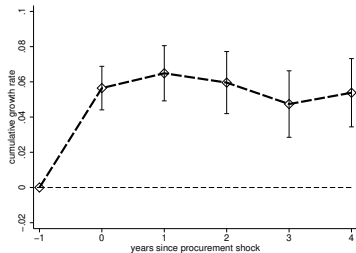
↑ small firms' prob. of winning contracts by targeting a size premium of 50% (versus 72% in Spain)

Trade-off!: private sector performance VS. governments' efficiency

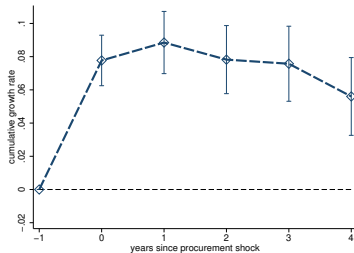
- Private sector performance
 - + new procurement firms **overcome constraints faster** \iff strengthening of "self-financing"
(despite an **initial crowding-out**)

Buy Small

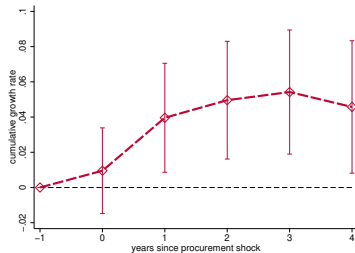
Estimated effect (data) of winning a procurement contract on credit



(a) total credit



(b) non-collateral credit

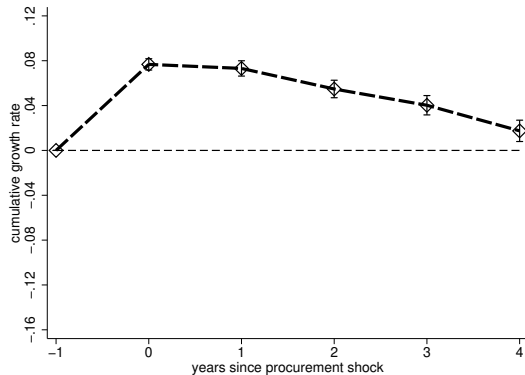


(c) collateral credit

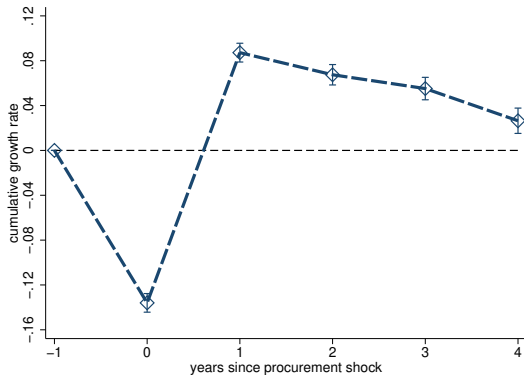
Figure: Procurement effect on credit

Buy Small

Estimated effect (data) of winning a procurement contract on sales



(a) total sales



(b) sales to the private sector

- Similar evidence on procurement firms in Kenya (Tei Mensah et al., 2024)

Buy Small

Thought experiment and trade-off (1)

- **Q:** What if the government buys more from small firms? (keeping expenditure unchanged)

Trade-off! private sector performance VS. governments' efficiency

- Private sector performance
 - + new procurement firms overcome constraints faster \iff strengthening of "self-financing" (despite an initial crowding-out)
 - - big firms accumulate less capital (lower probability of receiving a government contract)
- \Rightarrow overall + effect (K and $TFP_p \uparrow \Rightarrow Y_p \uparrow$ by 1.2%)

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Thought experiment and trade-off (2)

- Government performance as a final producer
 - - buy more from the pool of small firms \Rightarrow pay higher prices on average $\Rightarrow P_g \uparrow$
 $\Rightarrow \downarrow Y_g$ by 8% (given fixed budget)
- Net effect on real GDP $\sim 0\%$

Main takeaways:

- $Y_p \uparrow$ at the cost of decreasing Y_g
- Stronger $\uparrow Y_p$ if
 - Severe financial frictions, i.e., low ϕ_a, ϕ_p
 - Strong benefit to become a government supplier is, i.e., high ϕ_g
- Weaker $\downarrow Y_g$ if
 - Productivity gap between small versus large firms is low

Buy Local

Buy Local

Context

- Public procurement market **supposedly** perfectly **integrated in the EU**
- However, government purchases are still **highly geographically concentrated (Mulabdic and Rotunno, 2022)**
 - Regionally: > 50% awarded to local establishments
 - Nationally: > 98% awarded to national establishments
- In fact, improving access to procurement markets central in EC's agenda
 - "Increases government chances of getting better value for money and makes the use of public resources more efficient"

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Research question

- **Q:** Are **government agencies home-biased** in the **EU** (despite no explicit regulation)?
 - **Q.a:** If so, how much it **explains** of the observed governments' **local expenditure shares**?
 - **Q.b:** What is the **resulting "cost"** on governments' **provision of public services**?
- **Challenge:** local **expenditure shares do not directly identify HB**. Potentially driven by:
 1. **Bilateral frictions** to procure goods and services
 - Ex: transport costs, information frictions, path dependence, etc.
 2. **Governments' home bias**
- **Very different policy implications!**

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Our research

1. Two **novel strategies** to identify governments' home bias
2. Use a **structural model** to infer:
 - The effects of it on **procurement market integration**
 - The resulting **effect on the cost** of providing public services
 - Partial analysis (**abstracts from the benefits** of home bias)

Trade-off! ~~private sector performance~~ VS. **governments' efficiency**

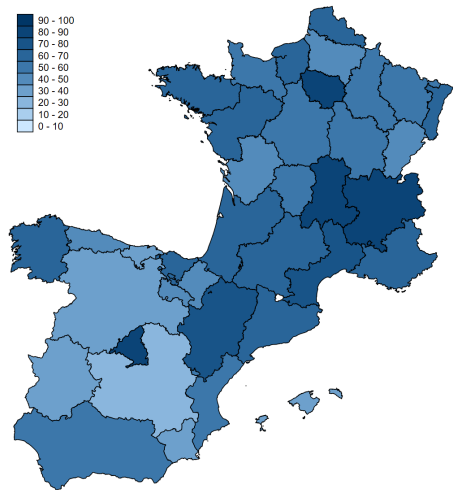
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The role of governments in explaining the lack of market integration

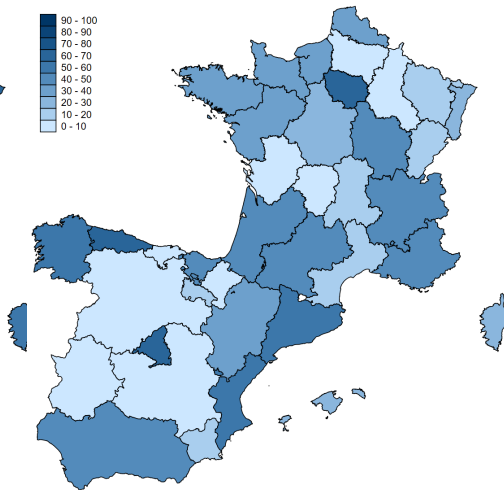
- Two strategies to identify governments' local bias
 1. Exploit co-existence of different government agencies in the same location
 - **Hypothesis:** "Home" has a different meaning for different government levels
 - **Subnational governments** discriminate against establishments **from other regions**
 - **National governments** discriminate against establishments **from other countries**

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Local expenditure share by type of government



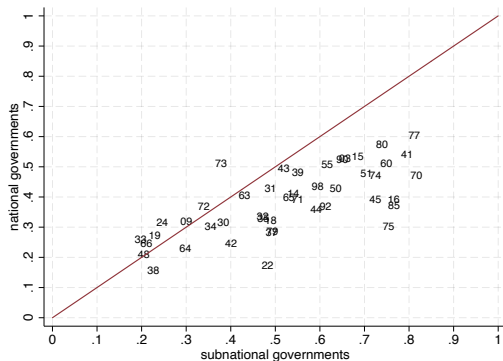
A) Sub-national governments (56%)



B) National governments (29%)

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Local expenditure shares by type of government and sector



- Examples:

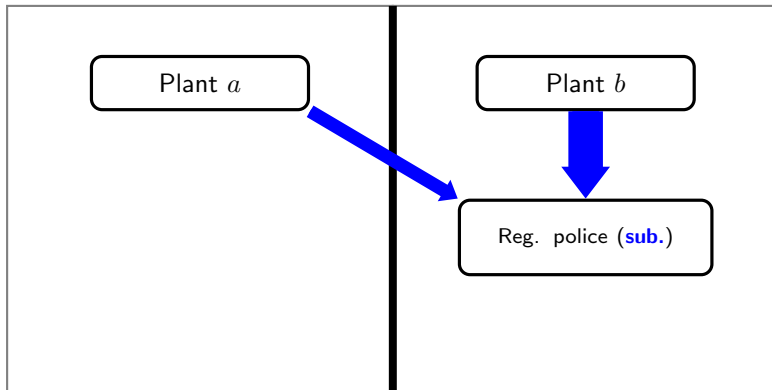
- “Laboratory, optical and precision equipments (38)”
- “Software package and information systems (48)”
- “Food, Beverage, Tobacco and related products (15)”
- “Education and Training Services (80)”

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Strategy # 1

REGION A

REGION B

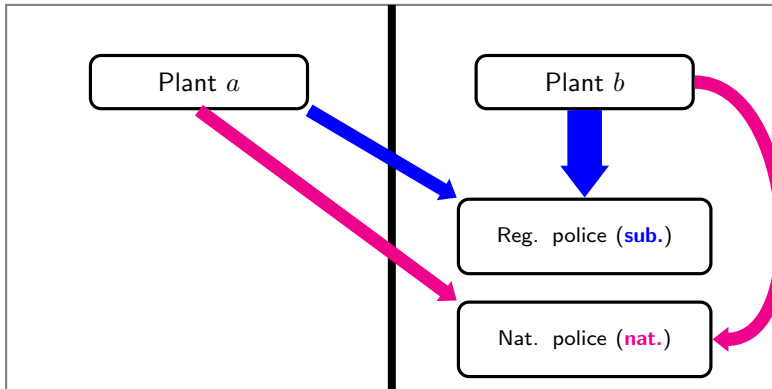


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Strategy # 1

REGION A

REGION B



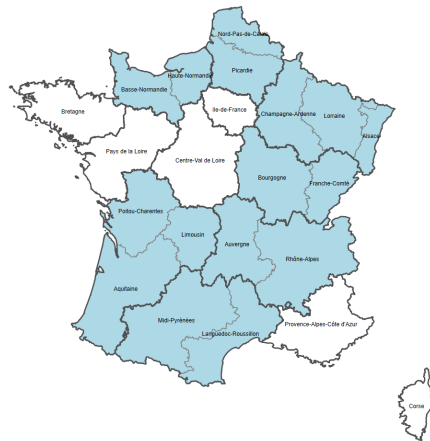
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The role of governments in explaining the lack of market integration

- Two strategies to identify governments' local bias
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 - **Hypothesis:** "Home" has a different meaning for different government levels
 - **Subnational governments** discriminate against establishments **from other regions**
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 2. Natural experiment in France
 - Consolidation of regions in 2016: from 21 to 13

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Strategy # 2



Notes: This figure shows the French distribution of regions before and after the integration 2016 integration reform. Regions in blue refer to regions that were affected by the integration process. Thin lines in grey represent the regional borders before the reform. Thick lines in black represent the regional borders after the reform.

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The role of governments in explaining the lack of market integration

- Two strategies to identify governments' local bias
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 2. Natural experiment in France
 - Consolidation of regions in 2016: from 21 to 13
- ⇒ **Key in the two strategies:** control for *origin-destination* level confounding factors

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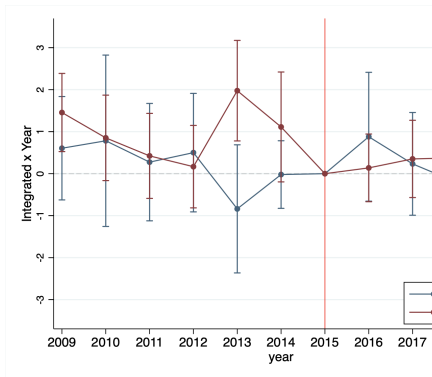
Main results

Reduced-form results

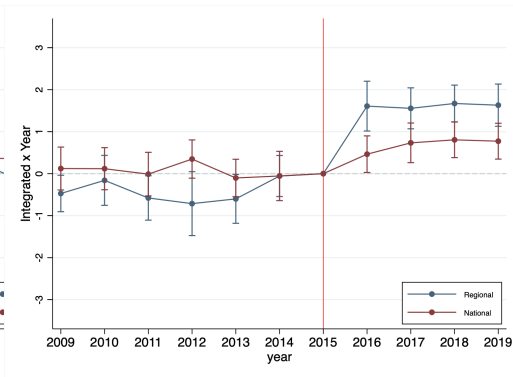
- Strategy # 1:
 - Non-local estab. (relative to local) **sell** $\approx 21\%$ **less** to subnational govts.
 - Non-local estab. (relative to local) **participate** $\approx 56\%$ **less** in subnational gov. contracts
- Strategy # 2:
 - Integration in procurement occurs through the **extensive margin only**
 - “New” local estab.’ participation **increases x2** in national gov and by **x4** in subnational gov

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Main results



(a) Intensive margin



(b) Extensive margin

Notes: This figure reports the effect of the French regional integration separately for the *intensive margin* (panel A) and the *extensive margin* (panel B). In particular, it shows the evolution of the estimated β 's and γ 's.

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Main results

Through the lens of the model

- Governments' HB increases local expenditure shares by $\sim 29\%$
- Increasing governments' price index P_g by $\sim 8\%$ \iff $\downarrow Y_g$ by $\sim 8\%$ (given fixed budget)

Are these effects on P_g reasonable?

- Currently building a dataset of US States' procurement
- Compare our effects with actual "buy local" policies in US states
 - Ex: 8% imposed by South Carolina to all other states
 - Ex: 5% imposed by Nevada to all other states

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Main takeaways and open questions

Main takeaways:

- Governments seem to be more locally-biased (in the EU) than as reflected by actual policies
- Reduced-form evidence + structural model \Rightarrow significant \uparrow in governments' cost of producing
- Key object: productivity gap between local vs. non-local firms

A few open questions:

- Why are governments locally-biased?
 - Pilot survey to procurement officers in Spain (w/ **Maria Arnal, EGVPF**)
- How “efficient” would governments be as importers?
 - Use customs data to see how much governments pay relative to private firms (w/ **Devaki Ghose and Bob Rijkers, DECTI**)

Final remarks

Final remarks

- Coming back to the **Trade-off: private sector performance VS. governments' efficiency**
 - Relatively extensive evidence on the former
 - More direct evidence needed on the latter
- This talk abstracted from many important aspects of procurement policies
 - Green procurement
 - Inclusive procurement
 - The role of sectors
 - Alternative frictions/distortions/externalities (e.g., learning by doing, scale economies)
 - ...
- Thanks a lot for your attention!