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Economics of Procurement

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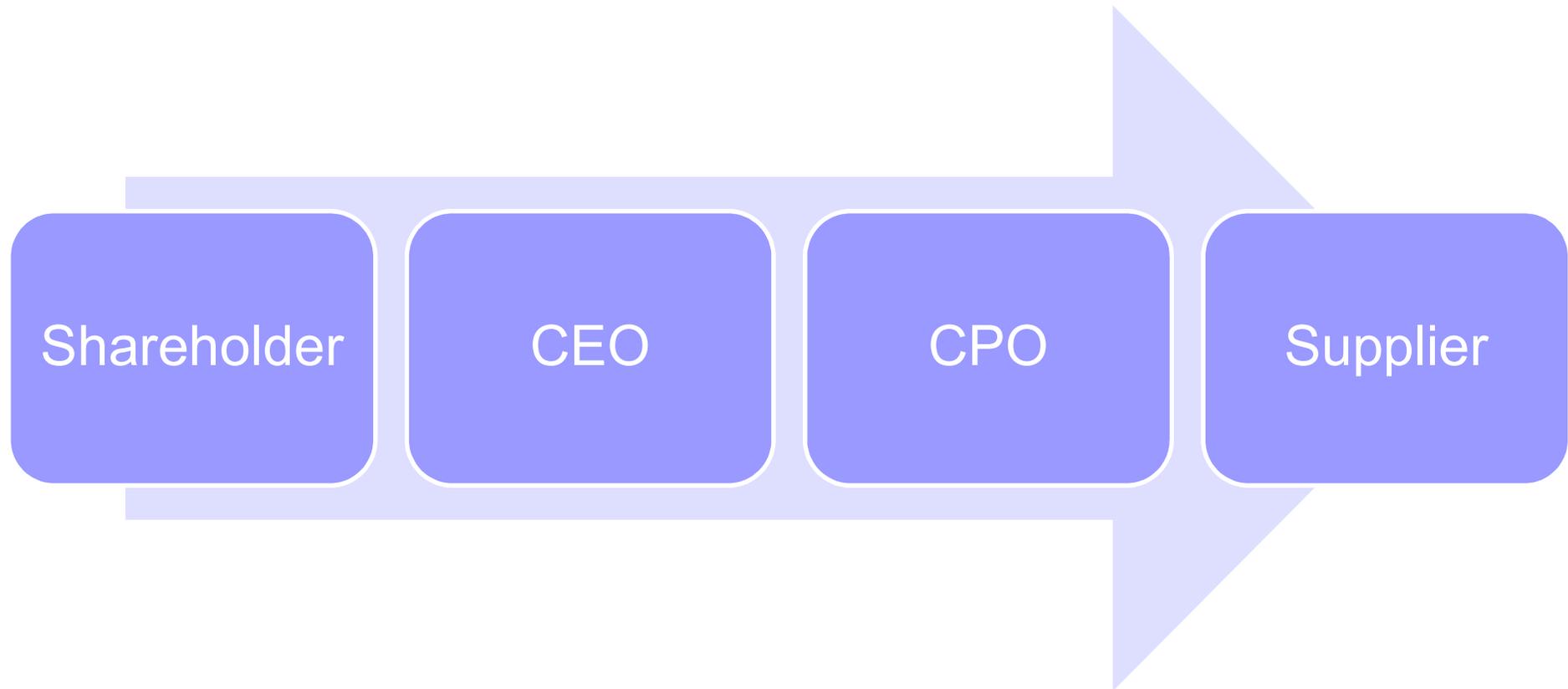
Where does Procurement come From

- PRO CURARE (Latin)
- *To take care*
- *... For someone else.*
- **QUALITY AND DELEGATION:** (procurer-supplier but also principal-procurer).

In the presence of asymmetric information, could lead to moral hazard (wrong effort) in addition to adverse selection (wrong guy)!

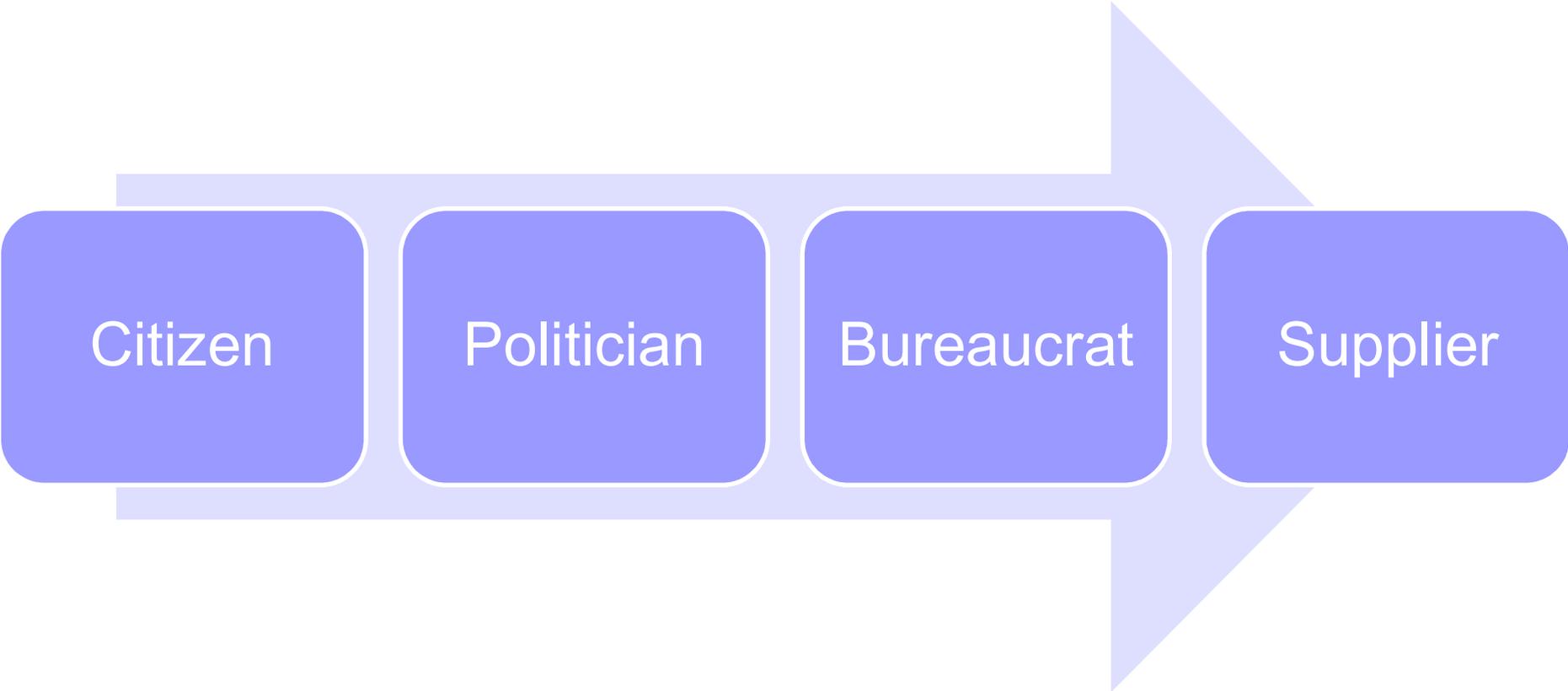


Delegation - Private





Delegation - Public



Citizen

Politician

Bureaucrat

Supplier



What is Procurement [Public too]

- [Public] Procurement is the process by which [state and local Public Administrations of a country] organizations i) establish and determine their **need** of, ii) demand the (competitive/non competitive) **provision** from **outside** entities (bidders/sole sourcers) of, iii) **contractualize** the **purchase** [with taxpayers' money] with **one** entity of and iv) **monitor/manage** the provision of: goods, services and works, in order to fulfill their **institutional mandate** with regards to their [citizens] principal/shareholders.



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NB: Procurement and Contract Theory

- The origin of the word contract is the Latin **contractus**, from *contrahere*, to **draw together**. Dictionary definitions of the term include ‘an agreement between two or more parties, especially one that is written and enforceable by law’.
- Well-designed contracts are essential to **effective** procurement. By fixing obligations and promises, contracts *try to* protect each party in a procurement transaction.
- “There are several types of contracts and very many dimensions along which apparently similar contracts differ, so that choosing the right contracting strategy is not always easy for a buyer. And a bad choice of contract can have very negative consequences for a buyer in terms of cost and quality of supply.” (Albano, Calzolari, Dini, Iossa and Spagnolo, 2006).



Not everything is Procured: maybe even not be provided!

- *«Larger and older cities provide more public services... Services for which contracting difficulties are greater are also provided somewhat less frequently».*
- Size (costs?) and experience matter.
- (Contractual) complexity too. Procurement developments affects public service availability (not only delivery)!

*«Contracting For Government Services: Theory And Evidence From U.S. Cities», Jonathan Levin and Steven Tadelis, Journal of Industrial Economics, 2010. Survey on 1043 US cities.



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Everything that is Provided May not be Procured: it may be provided differently

- *“Over 80% of services are provided either **inhouse** or through contracts with private sector firms. A smaller but still significant set of services is provided through contracts with other public agencies.”*
- Not necessarily expansion in public service delivery implies more public procurement.

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When is it Optimal to Outsource?

- Ignoring contracting costs, performance contracts will result in more efficient production than (labor intensive) inhouse. **Saving advantage?**
- Main contracting costs: difficulty of performance measurement, the lack/need of/for flexibility and the potential for holdup (more asymmetric information: “sour lock-in” or “corruption”). **Quality costs?**
- The optimal choice will **weigh** the added contractual costs of using performance contracts against the added benefits of the increased labor efficiency and lower labor costs.



Examples

- Police and fire services are two of the most difficult services to contract out. Both require significant flexibility and adaptation; performance is difficult to assess accurately and specialized local knowledge can play an important role.
- Street cleaning and building and grounds maintenance are two of the easiest services to contract out.

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Data

<i>Service</i>	Number of Cities Providing	Method of Provision		
		In-house	Public	Private
Operation of parking lots and garages	411	0.68	0.03	0.19
Utility meter reading	727	0.78	0.04	0.13
Residential solid waste collection	750	0.47	0.01	0.33
Commercial solid waste collection	558	0.32	0.01	0.43
Street/parking lot cleaning	935	0.72	0.02	0.18
Vehicle towing and storage	596	0.09	0.02	0.81
Buildings and grounds maintenance	1003	0.62	0.01	0.30
Building security	721	0.75	0.02	0.20
Parks landscaping and maintenance	996	0.69	0.05	0.18
Tree trimming/planting on public rights on way	939	0.42	0.02	0.39
Collection of delinquent taxes	584	0.40	0.39	0.17
Solid waste disposal	565	0.32	0.18	0.35
Street repair	1011	0.45	0.02	0.36
Operation/maintenance of recreation facilities	974	0.72	0.06	0.10
Water treatment	783	0.78	0.14	0.06
Insect/rodent control	443	0.42	0.36	0.16
Operation of libraries	632	0.56	0.29	0.03
Sewage collection and treatment	868	0.68	0.20	0.08
Operation of museums	342	0.25	0.16	0.29
Legal services	842	0.34	0.02	0.58
Sanitary inspection	496	0.51	0.40	0.04
Animal control	857	0.61	0.21	0.13
Emergency Medical service	769	0.54	0.14	0.19
Operation of daycare facilities	194	0.24	0.09	0.55
Programs for the elderly	582	0.28	0.20	0.19
Fire prevention suppression	932	0.82	0.07	0.00
Inspection/code enforcement	1013	0.84	0.03	0.08
Drug and alcohol treatment programs	201	0.05	0.38	0.39
Crime prevention/patrol	1021	0.86	0.07	0.00

Empirical Evidence

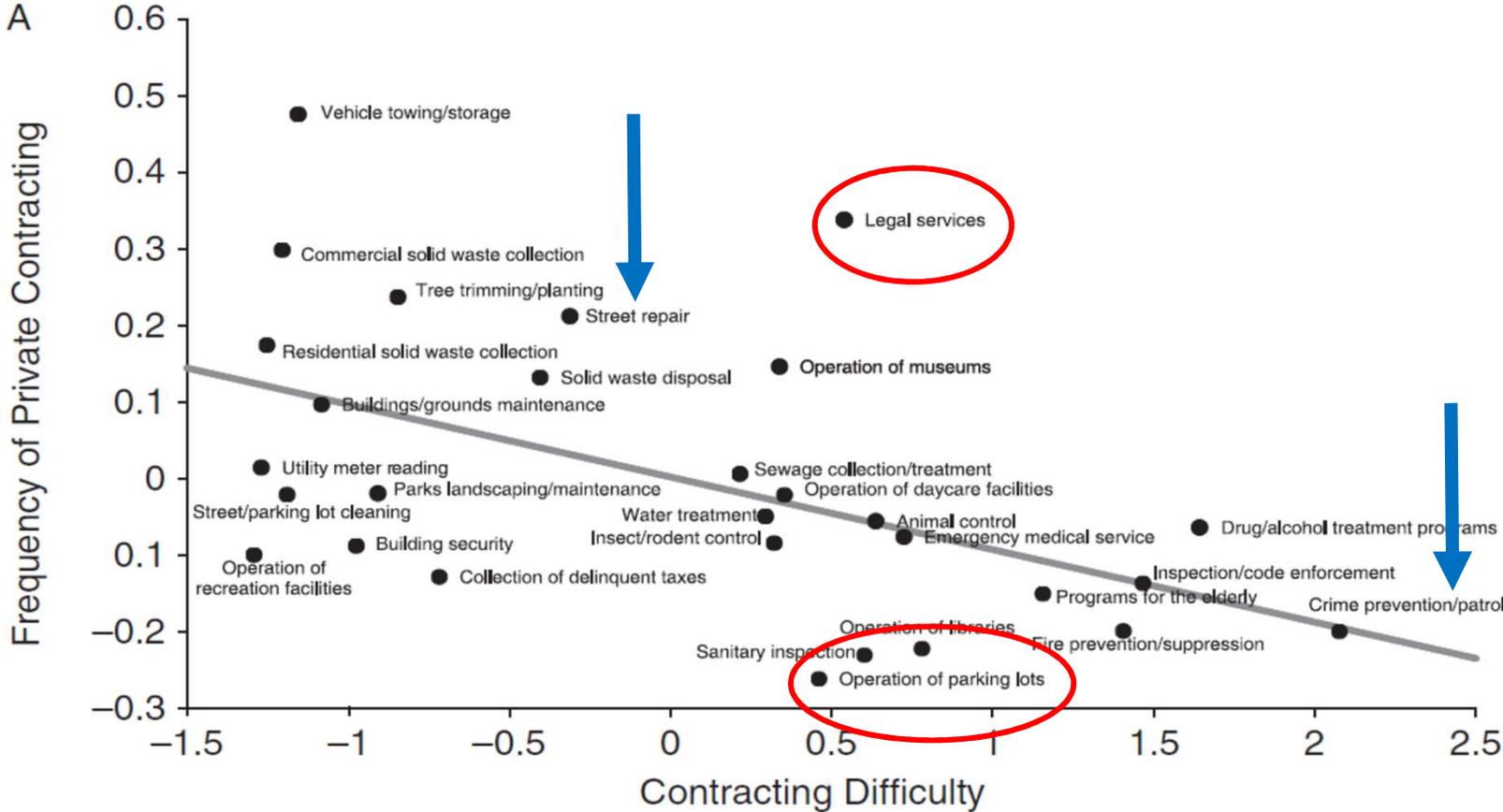


Figure 1A
Contract Difficulty and Private Contracting



Result n. 1

- Services for which it is harder [simpler] to write and administer performance contracts are less [more] likely to be “privatized” (i.e. procured, outsourced).

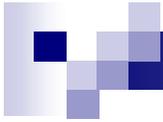
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Result n. 2

- “Large cities make the greatest use of privatization, and are the least likely to provide services in-house”. (economies of scale effect?)
- “The smallest cities are the most likely to contract with other public agencies, perhaps to take advantage of economies of scale.”
- “Cities with higher debt burdens are more likely to privatize in order to cut costs. Cities that privately contract 10% more of their services spend about 3% less per capita.”

*«Contracting For Government Services: Theory And Evidence From U.S. Cities», Jonathan Levin and Steven Tadelis, Journal of Industrial Economics, 2010. Survey on 1043 US cities.



P.S.: economies of scale = savings?



First speculation: the Perimeter of Procurement is expanding

High debts, public finance constraints/shocks, globalization: they should generate more focus on savings and therefore we should see more outsourcing and mechanisms generating economies of scale [aggregation with Central Purchasing Bodies and Joint Procurement initiatives].

Everything else equal this may have risks/negative implications for quality.

Policy hint:

To compensate this trend, better performance measurement, more flexibility, more SME concern, and less potential for holdup in procurement are needed. How?



Lowering contractual costs

1

Better performance measurement

Technology (example of GPS in local transport: measuring time of transportation; frequency of service; waiting periods at the bus stop) and competence.



Lowering contractual costs

2

More flexibility

A different role for the rule of law?
More discretion (more competence,
more accountability).



Lowering contractual costs

3

Less potential for hold-up

Less asymmetric information (more competence), guaranteed performance schemes, greater role for reputation of suppliers, more cooperation with suppliers, more competition, more attention to anticorruption.



Lowering contractual costs

4

Expanding Participation

allowing for criteria that help SMEs to participate when procurers «go large».



Second speculation; if procurement expands, organizations have to change

If the world out there changes, «forcing» optimally more procurement, everything else equal, this may have negative implications for efficiency/quality.

Something has to change in procurement too.

Policy hint:

Organizational reform should allow for more «independence with accountability» of procurer and possibly require...



First (interim) conclusion

- a) Technology developments in contract monitoring of performance, flexibility in the law and competence developments, which may make the optimal share of (public) services to be delivered through procurement processes rise;
- b) Shareholder involvement (Civil society), organizational reform & data development toward transparency and accountability may make the optimal share of (public) services to be delivered through procurement processes rise;
- c) ... If innovative procurement is a by-product of this organizational change, then we should also expect the number of (Public) services outsourced to expand (thanks to innovative procurement).



But, the optimal contract... might differ from the real one

Politically-driven decisions (patronage, favoritism) drive away from optimal contract theory based on efficiency.



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What is Procured? Pencils and...?

- In some cases, it is the actual development and/or delivery of the policy outcome that is procured, e.g. a **PPP** hospital (or jail) providing public health (security and re-education): the market provides the solution and delivers it to citizens.
- In other cases, what is procured is partly unknown (input vs. output): I pay you if you provide me with a solution that allows for hospital patients to be transferred across rooms with little “collateral damage”: the case of the “flying beds”.
Innovation.



How is (also) Procurement?

- “Typically, conducting the *bidding process* itself is **costly**. Competing firms must bear significant bid-preparation and documentation costs. The buyer ... incurs similar costs in evaluating bids and selecting a firm (or firms). Thus, contractors are quick to point out the risks they bear when the **bidding competition** is open to a large number of firms. Each firm typically devotes significant resources to the bidding competition but has a relatively small chance of winning the contract.” (Samuelson, 1984)



Where is Procurement

- How procurement contributes to [Government's policies and] the organization's outcomes may be **indirect** – for example, buying office supplies - or more **evident** when [well-educated citizens] customers see such outcome, e.g. shop-furnitures [school buildings and roads].
- Procurement, when not on paper, can occur on publicly accessible platforms (E-Bay), privately outsourced platforms (Bravo Solution for the London Olympic Games), Government-owned (CPBs) or privately-owned platforms. **E-procurement**



Who Procures in an Organization?

- Centralized Units
- Decentralized Units
- Hybrid Units



Who do we Procure From

- [Public] procurement affects a large part of what is demanded in a given country to the private sector (national and international; small or large firms) and NGOs, thereby **helping** those actors to encounter favorable opportunities where to sell, display talent, produce *innovation* but also **forcing** them to adapt to new or specific standards that maybe would not have arisen otherwise (imagine green products) or new claims (imagine minimum wage in a contract, percolating to the labor market at large, or human rights).
- Industrial policy?

Who do we Procure From

Development of eco-friendly fluorescent lamps in Japan following a dramatic public procurement shift in 2000 to purchase that product





Who do we Procure From

Inclusion of **labor and human rights dimensions** in public procurement enables the tender specifications, and the contractual commitment of the selected supplier, to function as an instrument for extending the effectiveness of labor and social policy, such as, for example, **in respecting the rights of the child or temporary workers**. The inclusion of respect for labor and human rights can be more naturally applied to first-tier suppliers and then cascaded down to sub-contractors, both at home and abroad, to support national policy objectives and fulfilment of international commitments. It is clear that enforcement of policy considerations in public procurement that promote labor and human rights is **a meaningful factor in promoting achievement of particular SDGs** (such as SDG 8.7, 12.7 and 16.3).



Who do we Procure From in EU

“Broad measures addressing the economic operator as a whole (e.g. requiring the company to have a human rights policy, or equal pay among all staff) cannot be required. A public authority can require that all supplies which the authority purchases are produced in accordance with, for example, Fair Trade labelling, but not that all the supplies produced by the economic operator, including supplies not produced for the contracting authority, shall be made according to such a standard.

This requirement limits the potential to use public procurement to fully implement the UNGPs and include measures to require, for example, that economic operators implement human rights protections and undertake human rights due diligence across the full breadth of their operations”.

https://www.humanrights.dk/sites/humanrights.dk/files/media/document/2022_08_04_EU-RegulatoryMeasuresExplainer_EN_V9.pdf



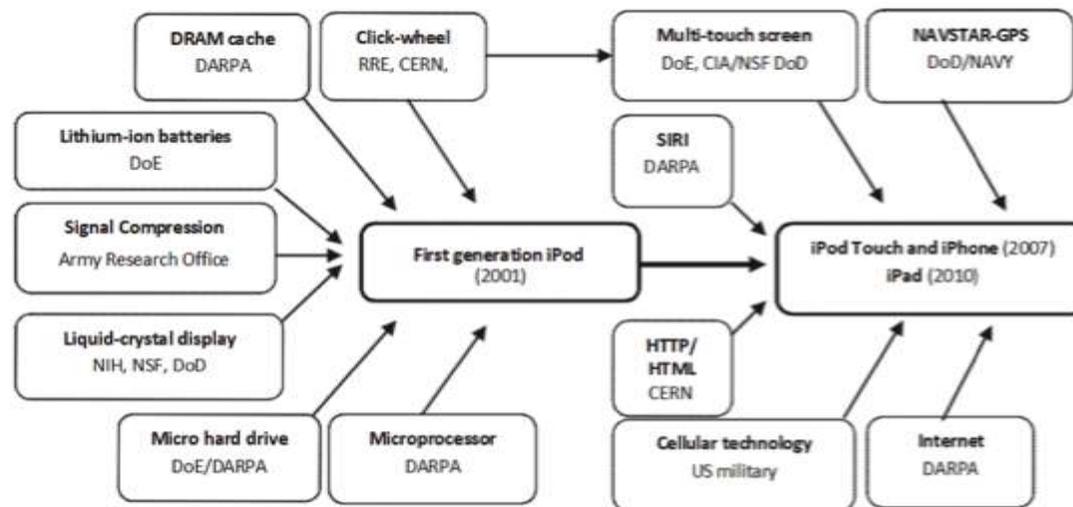
Who do we Procure From

The review showed that public buyers via **SPP** can exert what institutional theory (Di Maggio & Powell, 1983; Scott, 2008) refers to as coercive and mimetic pressures over its suppliers, which encourage them to transfer sustainable supply chain management practices within their supply chain. The effectiveness of these pressures however depends on contextual **factors**, including buyers' capabilities to integrate in the tender and then in the contract SPP requirements that are clear, specific, and that will be followed upon in contract monitoring and verification phases. Whereas on the supplier side, the reputational risk and the profit loss are the identified drivers that make the global firm reactive to those pressures. Global suppliers will be better able to enforce the required sustainable supply chain management practices when they actively bridge their cultural and geographic distance with their sub-suppliers located in emerging and developing countries through collaborative practices (e.g., suppliers development activities). Valentina Bianchini (2022)

Do we procure from the public sector? Where does the i-Phone Come From?

- https://www.youtube.com/watch?v=_FDUzBt12X0

What makes the iPhone so 'smart'?





What is Public Procurement about

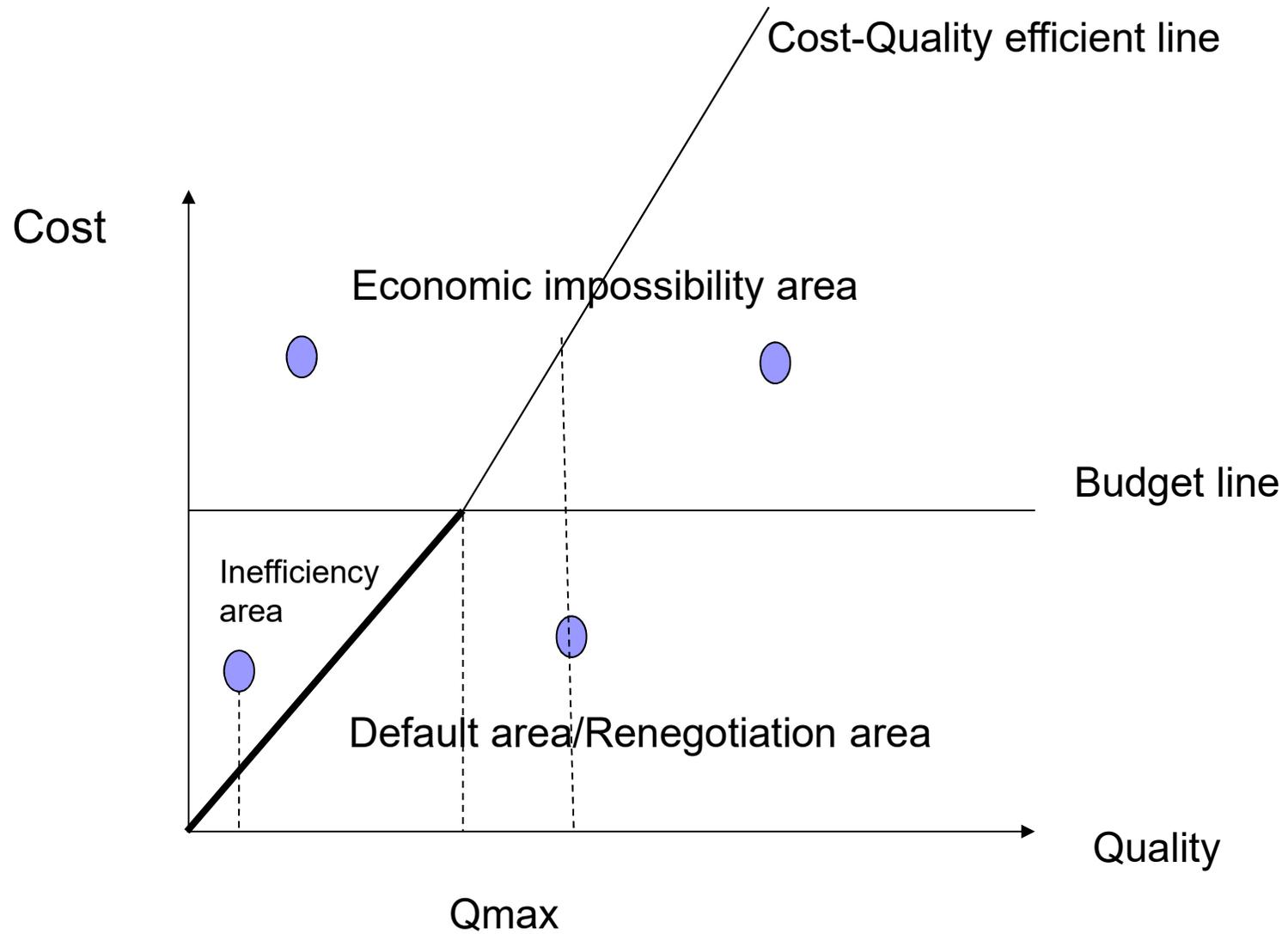
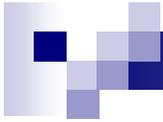
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- Policy-makers are thus forced to face three equally relevant questions: “how to buy”, “what to buy” and “who to buy from”.
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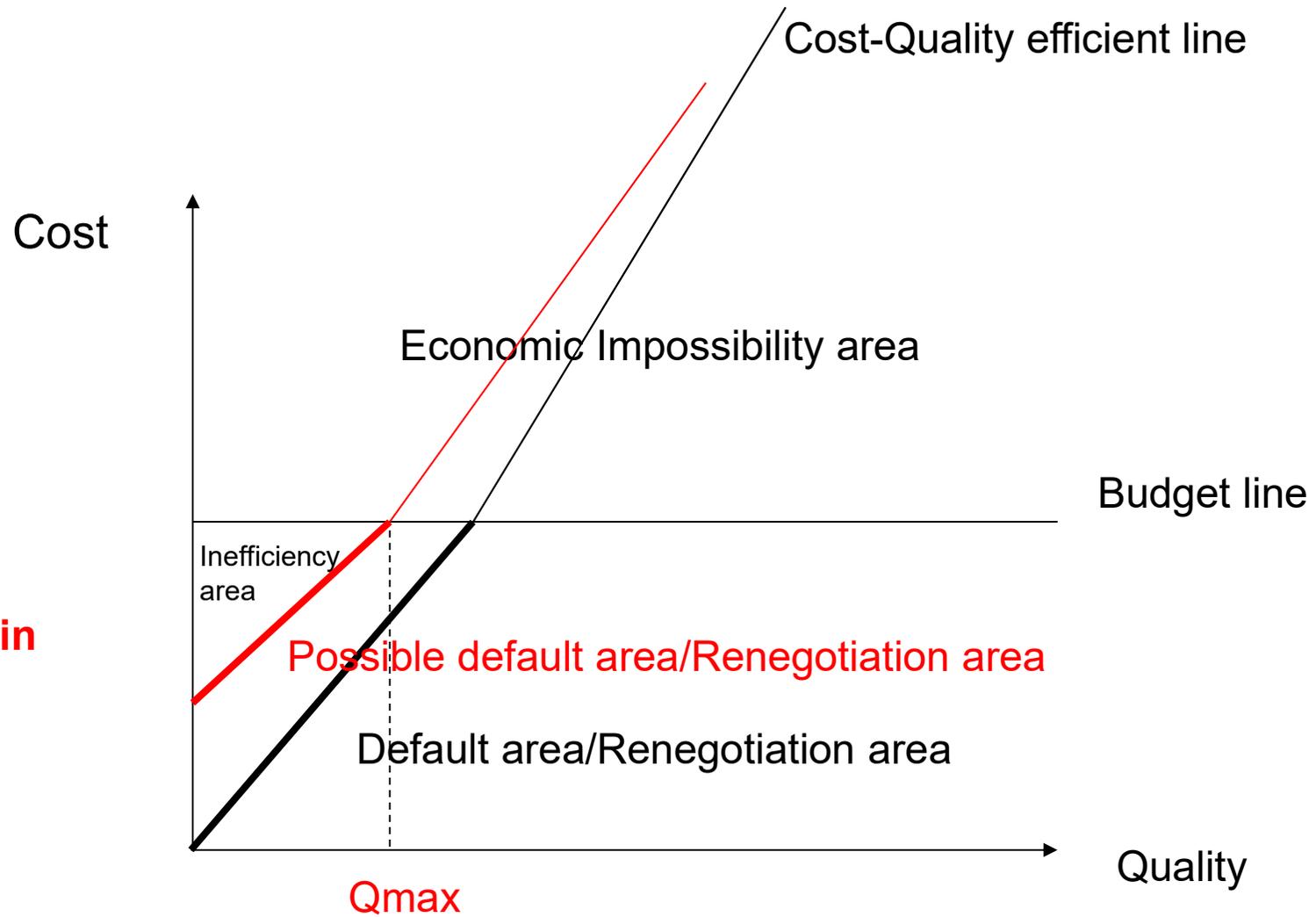
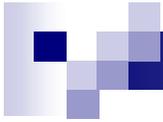
What is Public Procurement about?

Traditionally...

- The purchase of goods, services and works by the public sector in many ways can be **compared** to the equivalent process within private sector firms. Indeed, it requires on the part of who buys a need to be **efficient** and **effective**.
- As much as the procurement function has become **strategic** in contributing to a private firm's competitiveness in a globalized world, so a well-functioning public procurement can go miles in contributing to the **policy effectiveness** of government in modern society.



Efficiency



Cartel impact on choices



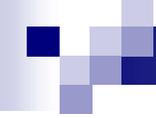
EFFECTIVENESS?

What is Public Procurement about?

More and more...

One of the seventeen **SDGs**, i.e. **12.7**, which the global community is collectively committed to realize by 2030, seeks to achieve ‘responsible consumption’ through eco-friendly production and consumption. That SDG specifically targets **the promotion of public procurement practices that are sustainable, in accordance with national policies and priorities**. A related SDG, i.e. SDG **16.6**, aims to develop effective, accountable, and transparent institutions at all levels. Improvements in transparency and accountability play an integral part in enhancing the quality of delivery of public procurement at national, regional, and global levels.





What is Public Procurement about OECD (2015), an example

- “**Primary** procurement **objective** refers to delivering goods, (**works**) and services necessary to **accomplish government mission** in a **timely, economical and efficient manner;**”
- **Secondary** (**?, Piga**) policy **objectives** refers to any of a variety of objectives such as sustainable green growth, the development of small and medium-sized enterprises, innovation, standards for responsible business conduct or broader industrial policy objectives, which governments **increasingly** pursue through use of procurement as a **policy lever**, in addition to the primary procurement objective”

<https://www.oecd.org/gov/public-procurement/OECD-Recommendation-on-Public-Procurement.pdf>

What is [Public?] Procurement about?

Evolution

Framework of Public Procurement Values

Goals	Values
Regulatory Goals	
Propriety	Conduct, behaviour and corporate governance
Transparency	Requirements and procedures are open
Commercial Goals	
Economy	Cost reduction
Efficiency	More for the same price; same for less
Socio-economic Goals (bundles of values)	
Social welfare	Equality, protection of minorities, sustainability
Public value	Trust, legitimacy, equity, ethos and accountability

**PS: Look for private sector
framework**



What is [Public?] Procurement about?

What is Value for Money?

«The effective, efficient, and economic use of resources, which requires an evaluation of relevant costs and **benefits** along with an assessment of risks, nonprice attributes, and/or total cost of ownership as appropriate.»

Asian Development Bank

<https://www.adb.org/sites/default/files/procurement-value-money.pdf>



What is Public Procurement about Evolution of Value?

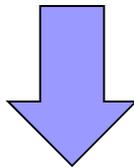
- “Current legal frameworks for procurement were dominantly developed for the core objectives of trade facilitation. **Development of countries was seen as secondary by product.**
- It is now well-recognized that public procurement is a complex activity because the process of government purchasing is animated by a varied matrix of national (and in many cases sub-national) policy objectives. The **balancing act** therefore need to start with the objectives of public procurement and should first and foremost be seen from a **country perspective** and secondly from a trade and international perspective”.
- Value for Money!

<https://www.worldbank.org/en/events/2022/01/06/a-global-procurement-partnership-for-sustainable-development-an-international-stocktaking-of-developments-in-public-proc>

SPP

“Promote public procurement practices that are sustainable, in accordance with **national policies and priorities**”.

Art 12.7 (SDG 12 - Responsible consumption and production)



Sustainable Public Procurement
SPP
Economic, Social and
Environmental





What is Public Procurement about Evolution

- “Value for Money!
- At the core of any public purchase of goods or services is whether such transaction provides optimal value for money (VfM) for the ultimate end-users of those goods or services **within the context of the applicable set of country-owned socio-economic and cultural priorities.**
- VfM at the most basic level means the acquisition of goods, works or services needed by a public purchaser on the best available terms (=money) **within the country’s identified core values of the procurement function (=value).”**

Similarities and differences

Table 1. Similarities and differences between sustainable public procurement (SPP) in the European Union (EU) and Sub-Saharan Africa (SSA).

	EU	SSA
Main determinant of what SPP practices are feasible	EU directives on public procurement	National agenda as set out in national legislation
Bias/dominant dimension of SPP	Environmental	Social
Scope of social dimension	Labor rights	Equality Social justice Human rights
Level at which social considerations are relevant	National context and increasingly in international value chains	National context
Instruments utilized to implement SPP	Bid criteria	Set-asides/reservations Award preferences
Major limitations on introducing SPP into procurements	Link to the subject matter of the contract	Empowering statutory framework
Drivers of SPP adoption/extension	National and municipal initiatives	Ad hoc national pilot projects, mostly externally initiated

Stoffel, T., Cravero, C., La Chimia, A. and Quinot, G. “Multidimensionality of Sustainable Public Procurement (SPP)—Exploring Concepts and Effects in Sub-Saharan Africa and Europe” (2019) 11:22, 6352 Sustainability, 1-23 <https://doi.org/10.3390/su11226352>





A Little (tentative) History of procurement's evolution globally (with no flags)

	Effective checks	Ineffective checks
Discretion		
Rules		

A Little (tentative) History of procurement's evolution globally (with no flags)

	Effective checks	Ineffective checks
Discretion		<p>Early stages of development</p> <p>Corruption pervasive and lack of competence</p> <p>High Costs, Low Quality</p> <p>No Planning</p>
Rules		

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Rules		<p>Advanced stages of development</p> <p>Corruption declining, greater competition</p> <p>Medium Costs, Low Quality</p> <p>Rules as Planning</p>

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A Little (tentative) History of procurement's evolution globally (with no flags)

	Effective checks	Ineffective checks
Discretion		<p>Early stage of development</p> <p>Corruption pervasive and lack of competence</p> <p>High Costs, Low Quality</p> <p>No Planning</p>
Rules	<p>Industrialized countries</p> <p>Corruption less relevant than waste from incompetence</p> <p>Medium Costs, Medium Quality</p> <p>Execution as Planning</p>	<p>Advanced stage of development</p> <p>Corruption declining, greater competition</p> <p>Medium Costs, Low Quality</p> <p>Rules as Planning</p>

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ENGINEERING

A Little (tentative) History of procurement's evolution globally (with no flags)

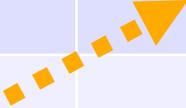
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	Effective checks	Ineffective checks
Discretion	<p>Service-intensive countries</p> <p>Competence and probity</p> <p>Low Costs, High Quality (sustainable)</p> <p>Organization and Competence as focus of Planning</p>	<p>Early stage of development</p> <p>Corruption pervasive and lack of competence</p> <p>High Costs, Low Quality</p> <p>No Planning</p>
Rules	<p>Industrialized countries</p> <p>Corruption less relevant than waste from incompetence</p> <p>Medium Costs, Medium Quality</p> <p>Execution as focus of Planning ENGINEERING</p>	<p>Advanced stages of development</p> <p>Corruption declining, greater competition</p> <p>Medium Costs, Low Quality</p> <p>Rules as focus of Planning</p>

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A
W

A Little (tentative) History of procurement's evolution globally (with no flags)

Administrations Universities	Law only	Interdisciplinary (and intersectoral)
Interdisciplinary (and intersectoral)		New stage
Law only	First stage	





What is Public Procurement about

- Effective **public** procurement in society, requires **several strategic** undertakings.
- Policy-makers are thus forced to face three equally relevant questions: “how to buy”, “what to buy” and “who to buy from”.
- These are questions asked in **private** procurement too but with lesser concern for other stakeholders.



What is Public Procurement about

- “how to buy”: 0) via paper or e-proc? 1) via MEAT (most economically advantageous tender) or lowest price? 2) very transparently, or less so? e.g.: via auction or negotiation?*
- “what to buy”: e.g. green, a concern for the environment or innovative, a concern for growth;
- “who to buy from”: e.g. SMEs, minorities, people with disabilities, war veterans ... a concern for justice.



*How to Buy?

While **auctions** are supposed to ensure transparency, selection of the lowest cost bidders by benefiting from competition and prevent biased awarding of contracts, it may have some undesirable **self-selection** consequences and fail to respond optimally to **ex post adaptation**. On the contrary, **negotiations** may easily be suspected of corruption and favouritism but in the same time these “relational” contracting modes allow **public** buyers and suppliers to spend more time discussing ex ante the characteristics of the project to be delivered, and the appropriate design of the contract thereby reducing the risk of ex post opportunistic haggling.

Hence, according to this literature, the trade-off between auctions and negotiations in procurement is assumed to depend on (1) the buyers’ level of expertise and competencies regarding the organization of competitive tendering, (2) the potential for competition, and (3) the level of complexity of the project to be procured. (Chong et al., 2010).



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- “what to buy”: e.g. green, a concern for the environment or innovative, a concern for growth;
- “who to buy from”: e.g. SMEs, minorities, people with disabilities, war veterans, responsible suppliers ... a concern for social justice, protection. Or buy ... nationally? A concern for protectionism.

Buy... American

The screenshot shows a web browser window displaying a news article on the Global News website. The browser's address bar shows the URL: <https://globalnews.ca/news/7597523/biden-buy-american-canada-2/>. The page features a navigation menu with categories like World, Canada, Local, Politics, Money, Health, Entertainment, Lifestyle, Watch, Perspectives, and Sports. The main content area displays a video player with a still image of Joe Biden at a podium. The background of the image includes the Presidential Seal and a circular logo that reads "THE FUTURE WILL BE MADE IN AMERICA THE FUTURE WILL BE". The Global News logo is visible in the bottom right corner of the video frame. Below the video, a caption reads: "WATCH: Biden signs executive order enacting 'Buy American' plan. – Jan 25, 2021". To the right of the video, there is a small thumbnail for another article titled "hospitals. But can they?". Below the video player, there are social media sharing icons (comment, Facebook, Twitter, Email) and font size controls (-A, A+). On the right side of the page, there is an advertisement for XME SpensieRata with the text "LA LINEA DI CREDITO SU MISURA PER LE COSE CHE AMI" and a "RICHIEDI ONLINE" button. A "Cookie Consent" banner is also visible at the bottom right. The Windows taskbar at the bottom shows the search bar with the text "Scrivi qui per eseguire la ricerca", several application icons, and system tray information including the date "14/09/2021" and time "08:18".

<https://globalnews.ca/news/7597523/biden-buy-american-canada-2/>



How Large is Public Procurement

- Government expenditure for purchases of goods, services and works (public procurement) is a key component of national income and well-being. World estimates (OECD) see procurement as approximately 15% of GDP; while across the European Union expenditure on goods, services and works currently (2015) represents 14% of GDP (excluding the utilities) on average (<https://ec.europa.eu/docsroom/documents/20679/attachments/1/translations/en/renditions/native>) and, at the end of the century, the 106 developing countries' procurement markets amounted to 13.9 percent of the total worldwide procurement spending.



How many Procurers in each Sector?

- Governments may be monopsonists or the biggest purchaser (e.g. in health, education and military), but relatively small in terms of other markets (e.g. cookies (for soldiers)).
- Similarly, some (large) private firms can be monopsonists (Amazon?). Or sometimes small firms (Chinese restaurants in Rome alone buy dumpling paste in Rome).



What Bargaining Structure in each Sector?

- Therefore, the state can be a monopsonist, with a large power to set market rates (e.g temporary nurses and teachers) and prices in some sectors or almost a price-taker in others (IT hardware, food etc.).
- Sometimes a bilateral monopoly (submarines/medicines) occurs or, when facing an oligopoly (phone services), intermediate situations (depending on centralization or not in the public). Issue of bargaining power.
- Analogous cases can apply for large private firms (less for small ones).



Bargaining Structure and Procurement Outcomes: Covid

UK vs. EU: a very different negotiating approach.

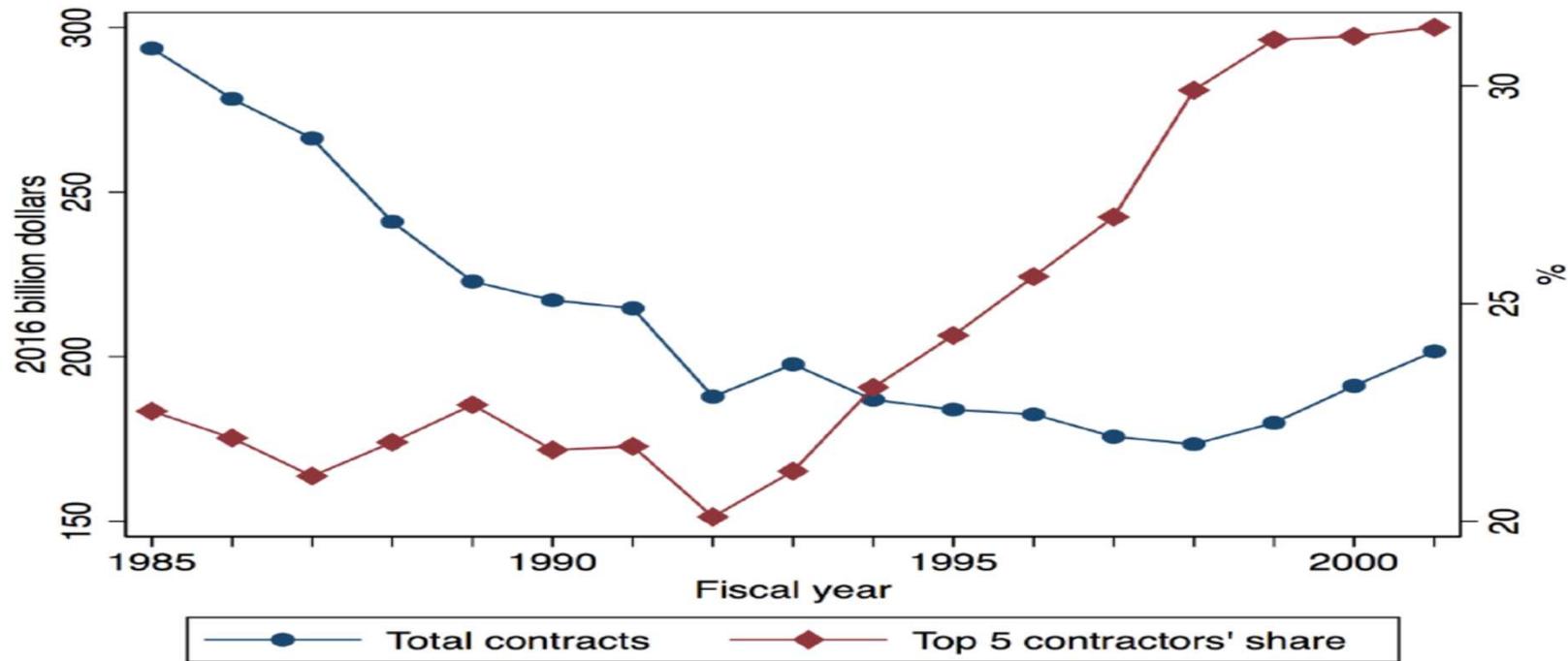
“The first thing is to be partners, not adversaries. And that is very unlike normal government **procurement**, which is all about how you can get the cheapest price. . . There’s a partnering mindset that is very different from what’s normal in government”.

“Europe’s first deal, with AstraZeneca, came in August, months after the United States. And while Europe negotiated as a powerful buyer, it lacked the wartime **procurement** powers that the Trump administration had used to secure raw materials for companies”.

<https://www.ft.com/content/8d9edc58-7922-496a-942f-5360bfe84876>
<https://www.ft.com/content/8d9edc58-7922-496a-942f-5360bfe84876>
<https://www.nytimes.com/2021/03/20/world/europe/europe-vaccine-rollout-astrazeneca.html>

Market Structure and Procurement Outcomes: a Case Study

Figure 1: Aggregate contract spending and concentration



THE IMPACT OF INDUSTRY CONSOLIDATION ON GOVERNMENT PROCUREMENT: EVIDENCE FROM DEPARTMENT OF DEFENSE CONTRACTING
Rodrigo Carrila and Mark Duggan, Working Paper 25160, <http://www.nber.org/papers/w25160>



Market Structure and Procurement Outcomes: a Case Study

This substantial increase in concentration was largely driven by a series of mergers between defense contractors. In fact, the DoD itself was reported to have encouraged consolidation between contractors in the early 1990s, as a response to recent and expected future budget cuts following the end of the Cold war era.

Over the next decade, the share of contract dollars going to the top 5 contractors increased by roughly 50%, with four out of those five contractors being the result of the previously mentioned mergers.



Market Structure and Procurement Outcomes: a Case Study

An increase in HHI of 0.02 (say, generated by the merger of two firms with 10% market share each), would cause the share of noncompetitive or single-bid contract dollars to increase by 7.5 percentage points ($\approx 0.02 \times 3.77$). This would represent an 18% increase given the mean share of 42.1%.

(The same with cost plus contracts that increased compared to fixed price contracts, GP).

We therefore interpret these results as evidence that rises in product market-level concentration caused the procurement process to become less competitive.



Market Structure and Procurement Outcomes: a Case Study

In March 2009, President Obama signed a memorandum that declared that “sole-source contracts, contracts with a limited number of sources and cost-reimbursement contracts create a risk that taxpayer funds will be spent on contracts that are wasteful, inefficient, subject to misuse, or otherwise not well designed to serve the needs of the Federal Government or the interests of the American taxpayer.”

If this association between procurement terms and cost efficiency is correct, then our previous discussion should imply that **consolidation also led to higher procurement costs.**



Market Structure and Procurement Outcomes: a Case Study

Not necessarily. Various effects are at work.

Firms may have bid less aggressively knowing that there were fewer potential competitors. The shift to cost-plus contracting may have allowed firms that were awarded contracts to opportunistically push spending higher.

On the other hand, the merged firms might have been more efficient than their predecessors and consequently submitted bids with lower prices. Similarly, government officials may be well-positioned given their significant (current and future) buying power to constrain cost increases.



Market Structure and Procurement Outcomes: a Case Study

Did consolidation lead to higher procurement costs? It did not.

The same increase in HHI of 0.02 that we have considered above led to a **reduction** of 6.5% in spending.

The government is a monopsonist! Sales to the U.S. government represent approximately 70% of the revenue for the Department of Defense's largest contractor, Lockheed Martin Corporation.



Market Structure and Procurement Outcomes: a Case Study

Did consolidation lead to higher procurement costs? It did not.
The same increase in HHI of 0.02 that we have considered above led to a **reduction** of 6.5% in spending.

Also, consider the dynamic incentives introduced by the repeated nature of the procurement process.

Contractors would find it optimal to consider not only the profits accruing from their current portfolio of contracts, but also the expected future contracts that they may obtain from the government. To the extent that **reputation** is an important factor in this repeated game, contractors thinking of increasing prices will trade off a short-term profit opportunity against a potentially lower stream of future profits coming from new contracts.



What does Public Procurement do

- The size of government purchases also plays a key role during bad times, when it helps smoothing the harshness of business cycles, by declining less than the overall economy, and when it can be used discretionally to revamp an economy in a slump. OECD estimates of the short-term multipliers (impact on GDP) of a 1% increase of government consumption range from +0,5 to 0,9 and from +0,9 to 1,1 for government investment. That is, the percentage effect on GDP, averaged over the first and second year, of a 1% of GDP change in government consumption or investment is likely to be the same or at least half of that.
- “Tax cuts, especially temporary ones, and fiscal relief to the states are likely to create fewer jobs than direct increases in government purchases”, claims the 2009 Obama Administration’ proposal Job Impact of the American Recovery and Reinvestment Plan, that embeds in its analysis similar multiplicative effects of real government purchases.

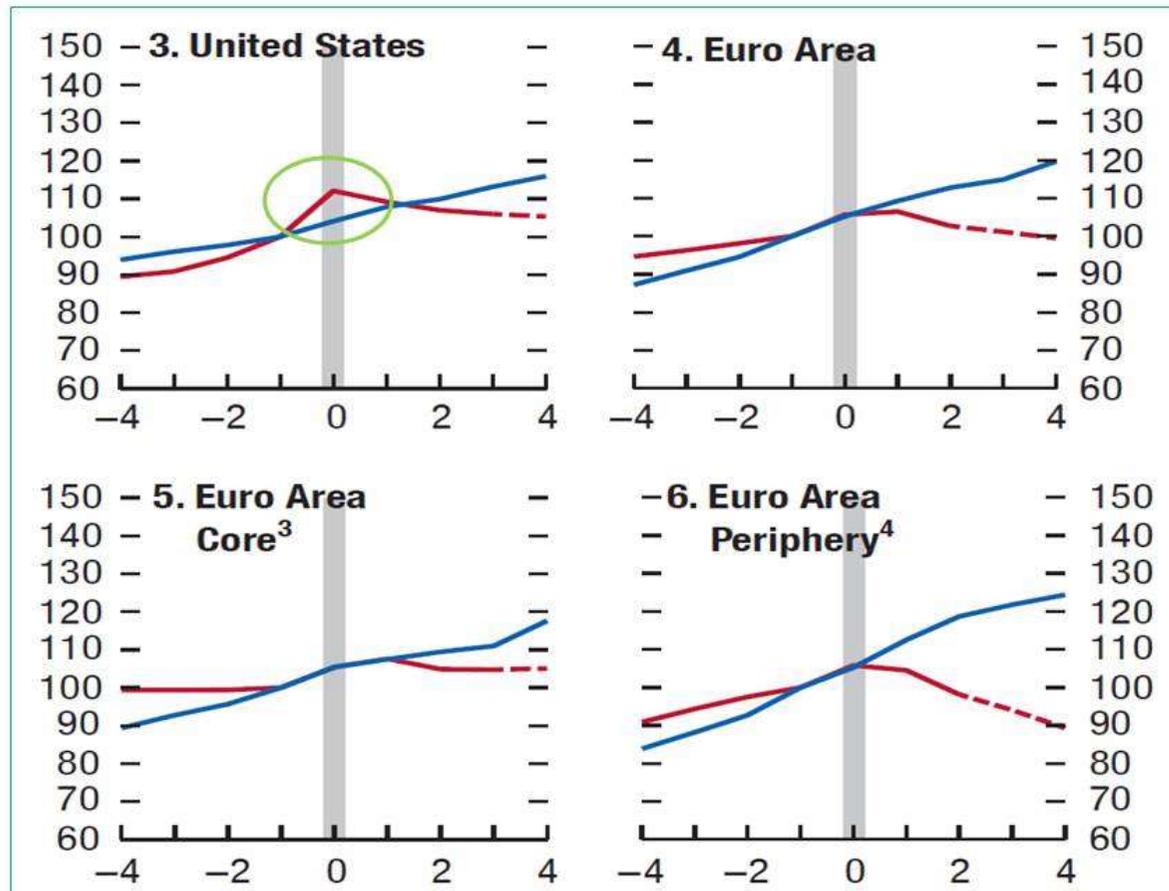


What does Public Procurement do

In 2008 we have witnessed in many countries a vast increase in the use of fiscal deficits to smooth out the global crisis so as to avoid the use of higher taxes, because of its recessionary impact. And do what with those resources?

Not surprisingly, some governments have turned to using strategically public procurement to exit the swamp.

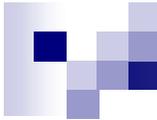
Not in Europe!



But effective public procurement may be a strategic tool not only to boost demand but also to find resources in times of scarcity.



As recently put by the UK Office of Government Commerce: *“since we can’t borrow anymore, we see procurement as the best source of revenue stream... Investing in the function tasked with delivering these (efficiency) targets is a clear **spend to save** business case”.*



- However data show that, over the past decade, Governments are yet to take full advantage of the potential savings embedded in strategic procurement. The UK audit office, for example, shows substantial differences between the highest price and the lowest price of same goods purchased by 121 public bodies.

	Price Range	% Variation
Toner cartridge (per cartridge)	£41 to £89	117
Electricity (day rate kWh)	4.8p to 8.3p	73
Box of 5x500 sheet A4 (80g/m ²)	£6.95 to £14.95	115
Post It notes (pack of 12)	£4.41 to £10.55	139



How to foster **efficiency** and **effectiveness** in
procurement?

Buying **what you want**
(quantities, quality, impact, goals!)

at the lowest possible price compatible with
suppliers' capacity to deliver.

«The right stuff from the right people»!

Are we sure this is EASY?

Easy?

Effective procurement: buying the **right°** stuff ...

- ° **pro-curare! Right for whom?**
- ° **At society's level: unbiased by corruption/incompetence**
- ° **At society's (politics) level: how much green? how innovative? ...**
- ° **At the procurer's level: coherent with specifications, with market analysis, and internal client understanding**

... from the **right people***.

- * **At society (policy) level: Social preferences? Industrial preferences? ...**
- * **At the procurer's level: dynamically consistent (e.g. vendor rating) ...**

NB: With **Central Purchasing Bodies** often important actors between society(policy) and procurement level



What is Smart?

«The Right Stuff from the Right People»
depends also on the **cost** of such choices
(thus on the budget allocation and external constraints like cartels, markets...)

At the society (policy-level): How costly is green? And buying from SMEs only? How corrupt is the system?

At the procurer's level: How competent are we (e.g. for innovation purchases)? And how organized? How much corrupt?

Effectiveness presumes Efficient procurement:
buying it also at the right, **minimum**, cost
(organizational, transaction, disposal, price + ...)

Short-run efficiency: taking organization, e-proc, competences, corruption as given;

Long-run efficiency: choosing the right level of centralization, e-proc, competences, integrity etc...

Keeping in mind that some «external constraints», like cartels, can be faced both in the short-term with good procurement practices and in the long-run with good institutional reforms.



Key Moments in Procurement

Q^s. Estimating needs and processes: *product's quality, contract's length, location (lots), (how much and how) centralizing?*

P^s x Q. **The tender,** price only. *Base price, risky bids, open tender vs. negotiation; sealed bid vs auction etc....*

P^s x (Q + ΔQ^p). **MEAT** criteria, price and quality. *Scoring rules.*

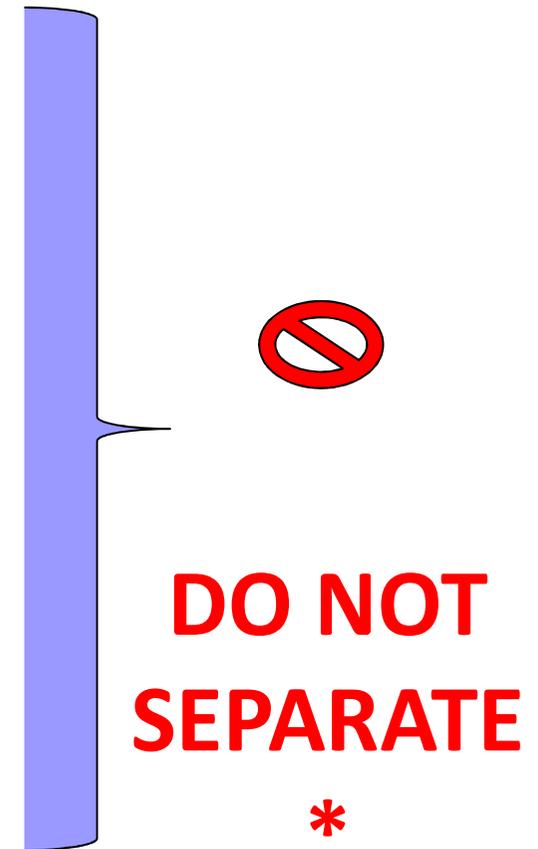
P x (Q - ΔQ^e). **Coherence of quality.** *Checks, inspections, fines, KPIs, customer satisfaction.*

Key Moments in Procurement

Q^s . Demand Management.

$P^s \times (Q + \Delta Q^p)$. Sourcing .

$P \times (Q - \Delta Q^e)$. Supply Management.



Key Moments in Procurement

Q^s . Demand Management.

$P^s \times (Q + \Delta Q^p)$. Sourcing .

$P \times (Q - \Delta Q^e)$. Supply Management.



**DO NOT
SEPARATE**

*



Demand management and market analysis: some procurer's issues

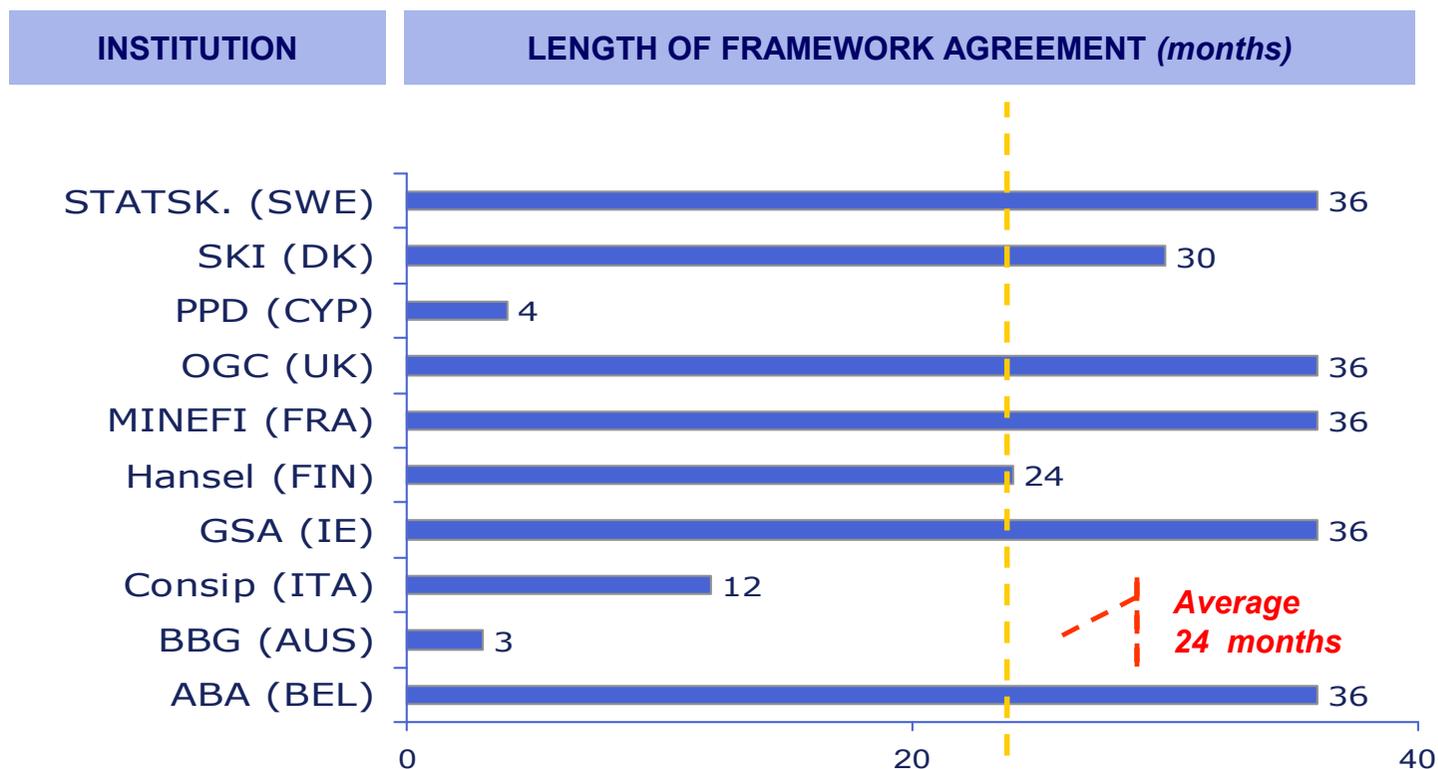
Which contract **length**? Technology matters, economic factors too, but also strategic factors (**cartel vs. lock-in?**)

Over which **space** (lots)? Economies of scale, (dis)economies of scale, strategic factors (**cartel vs. participation?**)

Delegating, how?



Length of Contract of Paper for Printers



The length of the Agreement varies depending on the institution. Why? Do you see a risk of fostering cartel agreements? Or lock-in?



Demand management and market analysis: some issues

Which contract length? Technology matters, economic factors too, but also strategic factors (cartel vs. lock-in?)

Over which space (lots)? Economies of scale, (dis)economies of scale, strategic factors (**cartel vs. participation?**)

Delegating, how?



Types of Lots

- Geographic
- Commodity-wise
- Sometimes with constraints (participation or victory)
- Sometimes divided among incumbents and non incumbents.



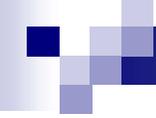
Types of Market Structures

- Monopolistic (patents)
- Cartelized
- Oligopolistic
- Competitive



Collusion

- Two firms.
- How many lots?
- One?
- Two?



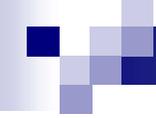
EU: Eliciting Participation?

*The contracting authority should have a duty to consider the appropriateness of dividing large contracts into lots while remaining free to decide autonomously on the basis of any reason it deems pertinent, without being subject to administrative or judicial supervision. **Where the contracting authority decides that it would not be appropriate to divide the contract into lots**, the individual report or the contract award notice should contain an indication of the main reasons for the contracting authority's choice.*

*Such reasons could for instance be that the contracting authority finds that such division could risk **restricting competition**, or risk rendering the execution of the contract excessively technically difficult or expensive, or that the need to coordinate the different contractors for the lots could seriously risk undermining the proper execution of the contract.*

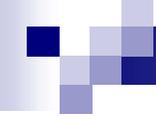
Goal: Harder to do **one** lot. Help to SMEs?

New 2014 EU Directive



EU: Discouraging the Right Policy

- “A contracting authority that used to tender a **single lot** every year and now tenders a single lot of half the original size every 6 months, is required to justify why it tenders a single lot.
- An administration that used to tender a certain type of goods or services divided **in 4 lots** and repeated every 6 months (8 times 25 €), and that now bundles demand and tenders everything divided in **two very large lots** once a year (twice 100 €) will not have to justify its bundling choices, because its procurements have 2 lots.
- This sounds very much against the general spirit of article 46 that, according to my understanding, aims at fostering unbundling of tenders in smaller lots that are **more accessible to SMEs**... Having 4 instead of 40 lots may have much bigger consequences than having 1 lot instead of 3”.



EU: Eliciting Participation (2)

*(30a) Where contracts are divided into lots, contracting authorities should, for instance in order to preserve competition or to ensure reliability of supply, **be allowed to limit the number of lots for which an economic operator may tender**; they should also be allowed to limit the number of lots that may be awarded to any one tenderer.*

- Restricting participation is not a good idea if you want to restrict awards to large firms: a superior outcome would certainly arise by letting each firm compete on all lots and afterwards limit to the most convenient lot their award.
- Unless... unless you are doing this for (inefficient?) SMEs. But in this case limiting lots participation is different from forbidding participation, as other countries do.



Demand management and market analysis: some issues

Which contract length? Technology matters, economic factors too, but also strategic factors (cartel vs. lock-in?)

Over which space (lots)? Economies of scale, (dis)economies of scale, strategic factors (cartel vs. participation?)

Delegating, how?



Delegating, How?

- Imagine one large organization with 1000 internal clients that need the product.
- One only tender (with one or ... 1000 lots)?
- Framework agreements (trade-off: more collusion vs. less sourcing risk)?
- 1000 autonomous tenders, one for each client?

Economies of transaction costs vs. informational losses



Delegating, How?

*CPB offer visible **benefits**: for example, by consolidating purchases across a number of purchasing bodies, **significant efficiencies** and simplification can be introduced into the system. Nevertheless, the increasing role of CPBs also carries with it a number of **risks** (e.g. **reduced access for SMEs due to a larger size of contracts**, reduced decentralisation, impact on the supply market, etc.). For these reasons, CPBs should be at the heart of the implementation of our policy.*

EC statement



PS

Then why are contracting authorities in the USA asked to bundle contracts only if savings are greater than a certain threshold?

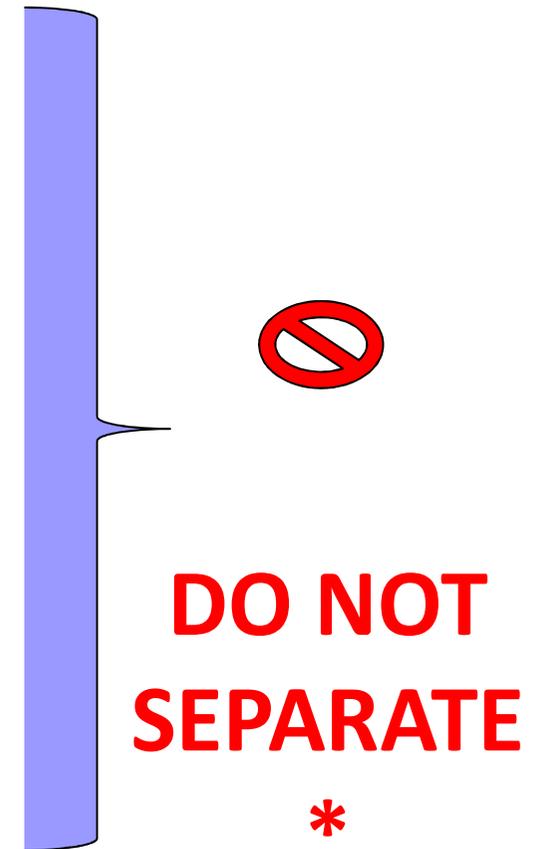
To be discussed later

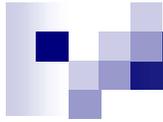
Key Moments in Procurement

Q^s . Demand Management.

$P^s \times (Q + \Delta Q^p)$. Sourcing .

$P \times (Q - \Delta Q^e)$. Supply Management.





In all tenders, stimulate participation.
Various issues derived from debate with
Antitrust Authority

Two suppliers, one lot. Do you allow or disallow
temporary groups of firms?

Base Price: do you select it close or distant from market price?

Tender design: one-shot bid or continuously descending bids?



Temporary Groupings

Two suppliers, one lot. Do you allow or disallow **temporary groups of firms?**

Italian Antitrust Authority: only if pro-competitive, to enlarge participation of those who can't on their own.

The case of a small Italian firm that tried to and failed to team up with a large firm.

If constraints on consortia are missing is it necessarily waste? Maybe a concern for ensuring participation from powerful suppliers?

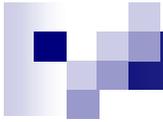


In all tenders, stimulate participation.
**Various issues derived from debate with
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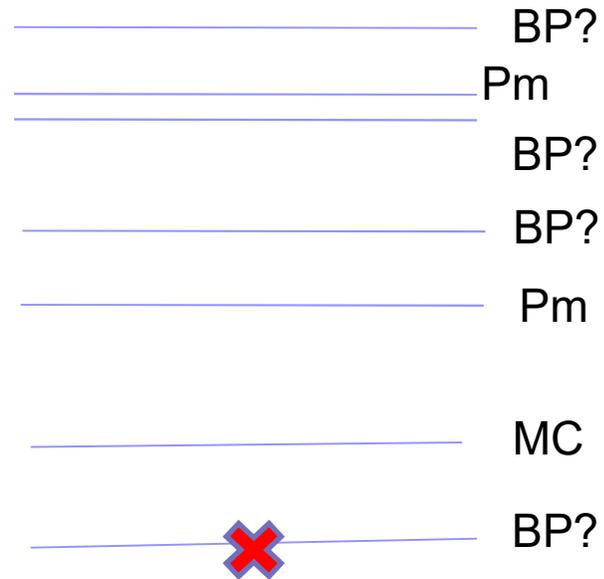
Two suppliers, one lot. Do you allow or disallow
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Base Price: do you select it close or distant from market
price?

Tender design: one-shot bid or continuously descending
bids?



Base price!



Pm: market price (varies depending on market structure)

BP: base price

MC: marginal cost



In all tenders, stimulate participation.
**Various issues derived from debate with
Antitrust Authority**

Two suppliers, one lot. Do you allow or disallow
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Do e-auctions generate competition?

Supply
**Wheelchairs for
Persons**

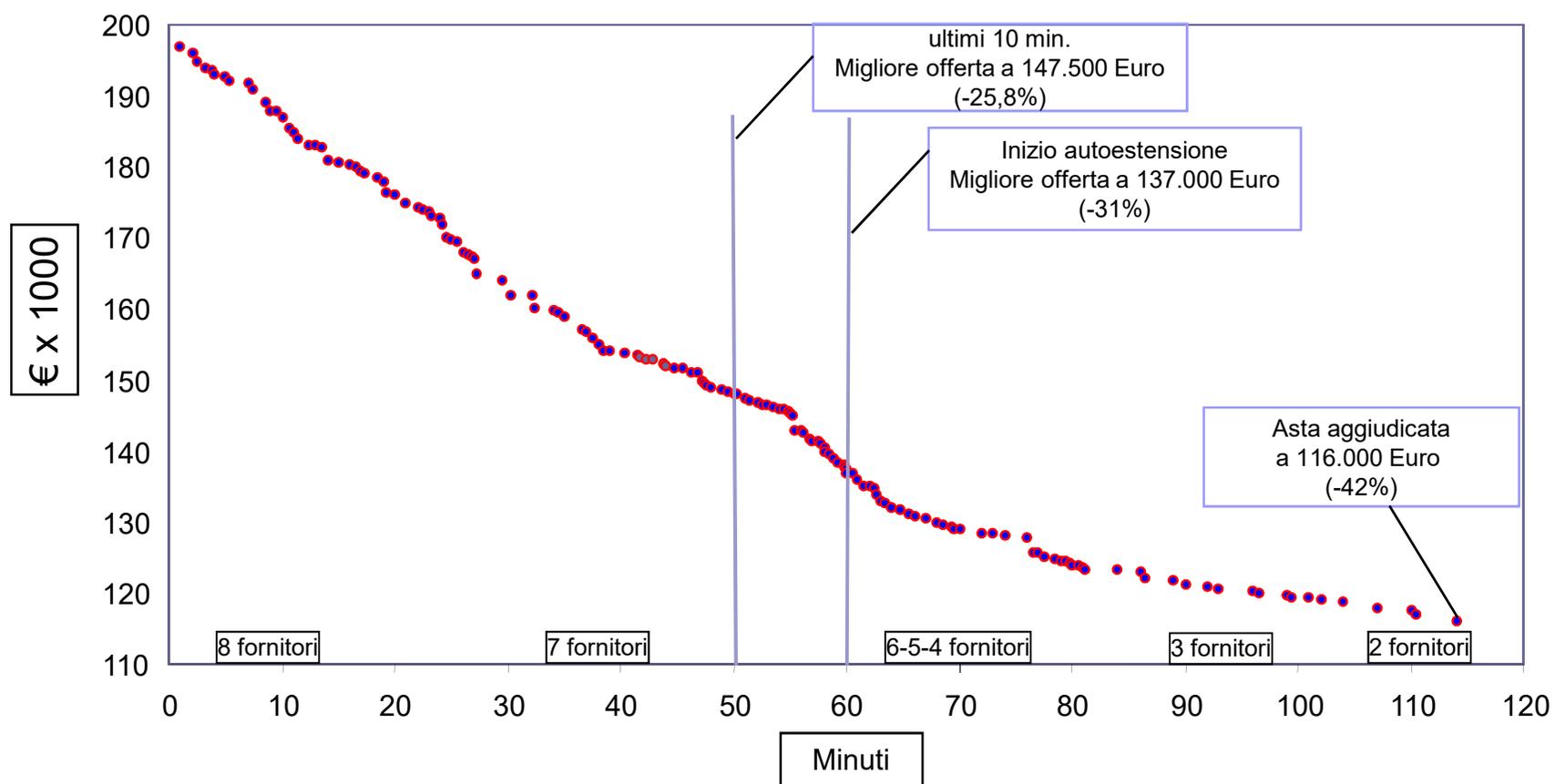
Contracting
Authority
Umbria Region

Base price
199.000 €

Awarded price
116.000 € Euro

Price decrease
42%

N° of suppliers
participating
8





Reverse auctions, opposite views

THE PRACTITIONER: “Thanks to electronic tools enterprises make various offers and at the same time see the others’ bids. In this way – already at the psychological level – competition is increased. This in turn leads to better results and savings for the Public Administration. Bidders are masked with a code, which does not allow them to know the identity of others during the tender. In this way the Administration tries to **avoid collusions**” (cited in Magrini, p. 36).

THE THEORIST:

- **ascending auctions remove uncertainty about the value of the good and make firms bid more aggressively.** But online auctions can increase collusion: competitors get to see, in real time, if a cartel agreement is being broken by a defector and have the possibility to retaliate with lower prices. Knowing this, there will be no defection and **collusion will be self-sustained**, causing harm to the Administration;
- the **openness of the format** may scare away small firms that anticipate being easily topped by big firms during the auction.
- Much better would be a **mix of the two methods?**

In all tenders, stimulate participation.

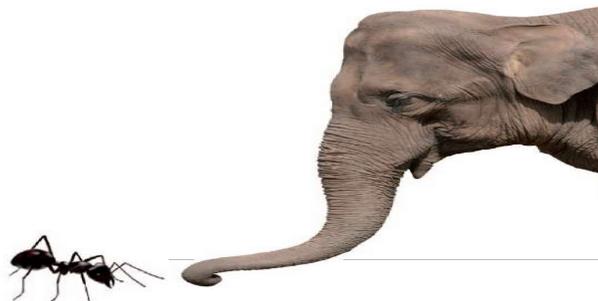
Various issues

Two suppliers, one lot. Do you allow or disallow **temporary groups of firms?**

Base Price: do you select it close or distant from market price?

Tender design: one-shot bid or continuously descending bids?

SMEs



?



The issue of participation of SMEs

Trouble for centralization especially. They seem to aim at enforcing SMEs participation through different mechanisms:

- **Using particular auction formats (i.e. combinatorial auction with package bidding);**
- **Splitting the supply contract into many smaller lots;**
- **Setting the reserve price at sufficiently high level;**
- **Defining less restrictive participation requirements;**
- **Promoting grouping of enterprises among smaller firms;**
- **Using awarding constraint in order to have more than one winning supplier;**
- **Disclosing as much information as possible to level information asymmetries;**
- **Promoting subcontracting**



The issue of participation of SMEs

Still, it remains a problem:

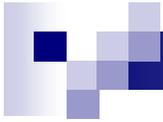
- **Lots are always too big even when they are small (David vs Goliath);**
- **Consortia are not always open (David vs Goliath);**
- **Buyers' risk aversion: "you never go wrong buying IBM";**
- **Treating different situations equally?**

SMEs are special

Problems faced by EU bidders, (by bidders size relative to large firms)

The column of totals displays on average which portion of firms interviewed answered “always” or “often”

Potential problems	Micro	Small	Medium	Large	TOTAL %
Over-emphasis on price	1,1	1,0	0,9	1	1,0
Long payment terms	1,4	1,2	1,1	1	1,1
Late payments	1,3	1,0	1,1	1	1,1
No debriefing	1,2	1,0	0,9	1	1,0
Administrative burden	1,5	1,1	1,2	1	1,1
Lack of clarity	1,4	1,0	1,0	1	1,1
Limited options for interaction	1,4	1,0	0,9	1	1,0
Disproportionate financial criteria	2,0	1,2	1,1	1	1,2
Insufficient time to bid	1,4	1,2	0,7	1	1,0
Lack of information on opportunities	1,4	1,3	1,1	1	1,1
Tenders not evaluated fairly	5,3	4,7	8,7	1	6,3
Disproportionate technical criteria	1,4	1,4	1,1	1	1,2
Large contract value	22,0	22,0	5,0	1	7,0
Joint fulfillment of criteria not allowed	2,0	2,0	1,5	1	1,3



Are large contracts the business of large firms only?



Are SMEs Good? So why large contracts?

“We have strong evidence than in many cases SMEs are considerably MORE efficient than large firms, so that the issue of how to involve them in government procurement is one of immediate efficiency, not just a political constraint or a costly investment for the future.

This evidence is under the eyes of everybody: it is the amount of **subcontracting** to SMEs that most large suppliers undertake after they win **large contracts** from bundled procurement. **If the large firms were more efficient than SMEs, they would lose money by subcontracting to SMEs, hence we would only observe subcontracting to other large firms”**

Giancarlo Spagnolo, Second Interdisciplinary Symposium on Public Procurement, Budapest 2014.



Not always?

- The typical problem with directly involving SMEs in Public Procurement is **coordinating their work and ensuring a reliable and constant level of quality**, not risking to pay more. Quality problems and coordination problems are important, they should be taken into account, and they are typically solved well by large suppliers who use subcontracting to them all the time.
- Even though SMEs are often more efficient in production than large firms, **coordination and quality control problems could be large enough to make it preferable for the government to contract with large firms and let them deal with SMEs as subcontractors.**
- Therefore, the problem is: **how do we know** when the difference in production efficiency between large firms and SMEs that could be captured by the buyer by having smaller lots **and direct involvement of SMEs**, are larger than the additional administrative, coordination and quality control costs that the buyer will have to incur when there is not a large supplier serving as an intermediary?

Giancarlo Spagnolo, Second Interdisciplinary Symposium on Public Procurement, Budapest 2014.



2 Types of Solutions

- Efficient SMEs? Go for small lots on which everybody can bid, but also allow for bids conditional on winning a large number of lots, a "package" or "combination" of lots. **Combinatorial bidding** is in the New Directives.
- “Inefficient” (new) SMEs? Accept the short-term cost in terms of competition today for more competition tomorrow: **set-asides**. But the European Union bans set-asides, in the name of competition and fairness.



Since 1953 with no uncertainty.

The Usa Small Business Act.

“The essence of the American economic system of private enterprise is **free competition** ... The preservation and expansion of such competition is basic not only to the **economic well-being** but to the **security** of this Nation. Such security and well-being **cannot be realized unless** the actual and potential capacity of small business is encouraged and developed. **It is the declared policy of the Congress that the Government should aid, counsel, assist, and protect, insofar as is possible, the interests of small-business concerns in order to preserve free competitive enterprise, to insure that a fair proportion of the total purchases and contracts or subcontracts for property and services for the Government (including but not limited to contracts or subcontracts for maintenance, repair, and construction) be placed with small business enterprises”**

A different vision of COMPETITION

Goal of 23% of awards



Since 1953 with no uncertainty. The Usa Small Business Act.

Procurement aggregation only allowed if necessary and justified, i.e. if, compared to non bundling, the Federal Government obtains substantial and measurable benefits, in terms of:

Cost savings

Quality improvement

Reduction in procurement time

Other measurable benefits.

Minimum benefits for allowing contract-bundling:

For contracts under \$75,000, at least 10% of the contract value

For contracts above \$75,000, at least 5% of contract value.

Target: At least 23% of federal prime contracts (by value and in aggregate) should be awarded to SMEs (maximum period: 9 years for the individual company).

Contracts with a value between \$2,500 and \$100,000 are reserved exclusively for SMEs, unless it is not possible to obtain two or more SMEs that are competitive in terms of price, quality and delivery of the goods and services being supplied.

Protection types

Table 1.14 Description of the Variables

Variables	Sub Variable	Variable Description
EU Recovery Plan for gender and youth Biden	1. Reservation	Set aside
		Qualification criteria
		Contractual condition
		Offering back
	2. Preferencing	Preferences at the short listing stage
		Award criteria (tender evaluation criteria)
	3. Indirect	Product/ service specification
		Design of specifications, contract conditions and procurement processes to benefit particular contractor



The EU paradigm

- “The EU is not in favour of reserving markets to specific undertakings. Such actions would also be in **contradiction with the principle of equal treatment** of tenderers, a fundamental pillar of the EU public procurement regime anchored by the Court of Justice in the Treaty freedoms.” **Green Paper (2012).**



Is Equal Treatment at Risk?

- But (US) SBA studies point out that “at the aggregate level, regulatory compliance costs per employee appear to be at least 36% higher in small firms than in medium size and large firms”.
- How could anyone argue that today’s tenders in the EU provides for equal treatment (yes) of equal situations (no)?



Are they all against equal treatment?

A few **tiny** nations have been using them:

- USA (since 1953), SB Act and SB Authority
- Brazil
- South Africa
- China
- India
- Mexico
- South Korea
- Japan
- ...

Shouldn't we at least discuss it?



Why? What is fair? Non discrimination

Direct discrimination is when an explicit distinction is made between groups of people that results in individuals from some groups being less able than others to exercise their rights.

Indirect discrimination is when a law, policy, or practice is presented in neutral terms (that is, no explicit distinctions are made) but it **disproportionately** disadvantages a specific group or groups.

<https://www.amnesty.org/en/what-we-do/discrimination/>

Ongoing direct discriminations, unfair, rarely generate reactions from governments which are usually in favor of such discriminations (e.g., apartheid regime).

Past direct discriminations and current indirect discriminations generate reactions. In procurement too and distinctively.

https://ccednet-rcdec.ca/sites/ccednet-rcdec.ca/files/ccednet/pdfs/2004-mccrudden-public_procurement.pdf



Types of preferences (affirmative action)

- * Race
- * SMEs
- * Gender
- * Ethnicity
- * War-veterans
- * People with disabilities
- * Local preferences?
- * Recently in MEAT criteria in EU: young and female-owned firms or employed.
- * And ...

Buy... American. PS: direct discrimination or indirect discrimination?

The screenshot shows a web browser displaying a news article from Global News. The browser's address bar shows the URL: <https://globalnews.ca/news/7597523/biden-buy-american-canada-2/>. The page features a navigation menu with categories like World, Canada, Local, Politics, Money, Health, Entertainment, Lifestyle, Watch, Perspectives, and Sports. The main content area displays a video player showing Joe Biden at a podium. Behind him is a blue backdrop with the Presidential Seal on the left and a circular logo on the right that reads "THE FUTURE WILL BE MADE IN AMERICA THE FUTURE WILL BE". The Global News logo is visible in the bottom right corner of the video frame. Below the video, a caption reads: "WATCH: Biden signs executive order enacting 'Buy American' plan. – Jan 25, 2021". To the right of the video, there is a small thumbnail for another article titled "hospitals. But can they?". Below the video player are social media sharing icons for Facebook, Twitter, and Email, along with a plus sign for more options. At the bottom of the browser window, the Windows taskbar is visible, showing the search bar with the text "Scrivi qui per eseguire la ricerca", several application icons, and system tray information including the date "14/09/2021" and time "08:18". An advertisement for "XME SpensieRata" is also visible on the right side of the page, with the text "LA LINEA DI CREDITO SU MISURA PER LE COSE CHE AMI" and a "RICHIEDI ONLINE" button.

<https://globalnews.ca/news/7597523/biden-buy-american-canada-2/>



The Sba Procurement Center Representative (Pcr) against risk-aversion of CPOs

These are representatives of the U.S. Small Business Administration in the various large Procurement Agencies.

Functions and Powers:

- **1. Analyze the procurement strategies and verify if contract-bundling is necessary and justified**
- **2. Propose alternative solutions to the contracting officer to foster SMEs participation**
- **3. In case of a failed agreement, escalate the issue in the hands of the Agency Manager.**



Why the EU resistance?

Worry for Frauds.

Complication of Measuring Impact.

**Preferential clauses are often seen as
generating dis-savings.**

To the contrary, they often reduce the
bargaining power of powerful



Preferences in Procurement, good (?) but...

- **Fraud.** “fake” (small) corporations might be created only for the purpose of being awarded the procurement contract at a higher price. Or else, large companies might redefine their structure to participate as small ones and obtain the advantage (Brazil). **A corrupt environment might make this fraud easier.**

Fraud or Misrepresentation Can Overstate SME Participation

Recently, the US General Accounting Office (GAO), upon checking set-aside contract eligibility for small businesses, found several to be awarded to ineligible companies. Of the 32 cases that were reviewed, 20 cases were identified contractors or contractor employees who were “found guilty, pled guilty, or settled with the government for representing themselves as eligible to receive set-aside contracts. These contractors falsified self-reported information and made false certifications to the government to claim eligibility by using eligible individuals as figurehead owners”. *

*** GAO, “Ongoing DOD Fraud Risk Assessment Efforts Should Include Contractor Ownership», November 2019. <https://www.gao.gov/assets/710/702890.pdf>**



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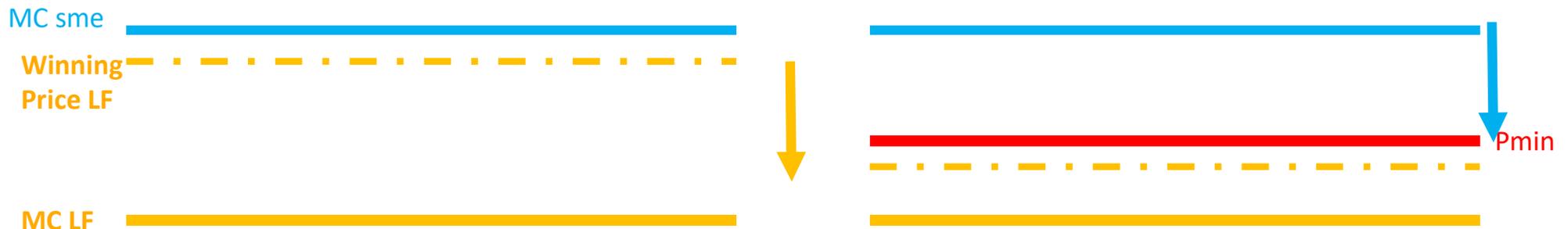


Unorthodox solutions: preferences

“Failing to recognize how **affirmative action** can be used to enhance procurement competition grossly overstates the cost of affirmative action subsidies.”

For example, nonpartisan state legislative analysts estimate the California Department of General Services spent an additional \$9.9 million last year by rejecting low bids from firms that failed to comply with affirmative action requirements. Unfortunately, these estimates ignore how affirmative action may have driven down the low bids that were used as the benchmark. Without the enhanced bidding competition created by affirmative action, these low bids and the low bids on other bidding contracts may have been substantially higher.”

The case of a price preference with large firms (LF) still winning with lower surplus

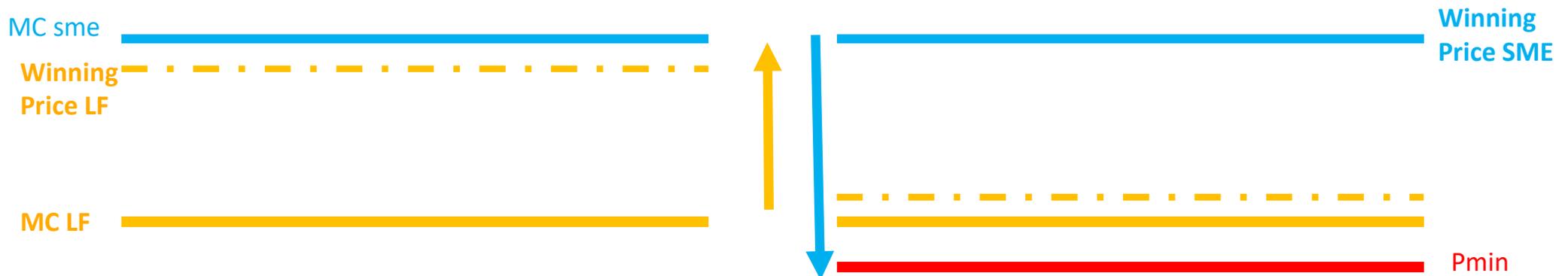


The red color introduces legislation for a minimum price discount with respect to the one of the SME to be awarded the tender.

The orange arrow shows the decline in winning price by large firm after the scheme, to the advantage of taxpayers, **the blue one** the minimum difference in price wrt to the SME one needed to win.

The preference scheme savings are not seen by taxpayers by looking at data.

The case of a price preference with large firms (LF) losing to inefficient SMEs



The red color introduces legislation for a minimum price discount with respect to the one of the SME to be awarded the tender.

The orange arrow shows the difference in the price by large firm and the one (winning) of the SME, to the disadvantage of taxpayers, **the blue one** the minimum difference in price wrt to the SME one needed to win.

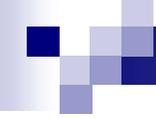
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Unorthodox solutions: set asides

- “For example, if four incumbent construction firms were bidding to build four different playgrounds, they might be able to coordinate their bidding (either tacitly or explicitly) to divide the contracts among themselves.”
- “Setting aside one of the bidding contracts for traditionally disadvantaged, non-incumbent firms may enhance intragroup competition, as the four incumbents must now compete for just three contracts. Any incumbent that believes it may end up empty-handed is likely to reduce the markup in its sealed bid. **While the government may pay more on contracts set aside for traditionally disadvantaged bidders, reduced costs for non-set-aside contracts can lower overall procurement costs.**”



Set asides impact

Removing set-asides in small tenders in Japan would lead to:

- a) In high-end projects, the number of LBs would drop from 8.85 to 5.60, which would raise the expected winning scores of those projects by 1.03 percent. **Large firms switch to small tenders.**
- b) At the same time, the LBs' participation in low-end projects would reduce small business (SB) entry into low-end projects. The mean number of SB participants would decline from 8.33 to 5.33. The number of both large-firm and SB participants in low-end projects would drop from 8.33 to 7.49 on average because, according to the static entry model, the participation of one more LB in the low-end projects would eliminate 1.56 SB participants on average.

Set-asides decrease effective contract prices by 0.22 percent.

Set-asides raises participation of small firms by 40%.



Private sector too!

- The tender, which amounted to € 80 million for the auction base, ended.
- 5 lots based on vertical technologies to the Business of **XXX**, within Software development with a contractor for Lot. The choice to create smaller lots has made it easier for SMEs to participate, since these often have specialized know-how while large multinationals are more cross-sectoral and have wider coverage. Among these, 3 lots out of 5 were divided into a large share - to which large companies could participate - and a small share (the proportion between large and small sub-lots was 70-30) to which only companies of a limited size could participate . In total, considering the split lots there were 8 lots, 3 of which were dedicated to SMEs, with 1 winner per lot.
- To meet SME needs, we have structured large lots as requiring local presence on all the specific XXX geographies of the tender (Europe, South and North America) while SMEs have been asked limited presence only to Italy and Spain. In the pre-launch phase, we also dealt with making possible groupings between Italian and Spanish SMEs so as to allow them to optimize the geographical presence / technical and economic offer, putting them in contact where necessary. The three Lots for SMEs included, as a back-up mechanism, the possibility that the second ranked in the big part of the lot would be recuperated out in the small lot if the possible SME participating did not meet a minimum technical score established as a threshold.



Private sector too!

In addition, only for large lots - for which the participation in temporary consortia was limited to 3 members, we envisaged the possibility of presenting a fourth firm who was required to present an innovative project developed by the same company that could contribute to obtaining an additional technical score. The requirement for this additional company was that it had to be in the register of "Innovative SMEs" or "Innovative Start-ups" of "Business Register". This has led all the companies participating in the 5 large lots to present this additional company to compete for the maximum technical score and, for the successful bidders, to entrust 5% of the contract to this company.

The result was the following: in large lots large companies participated as usual. In 2 small lots 3 temporary consortia participated for each lot (two of which were awarded each one a lot) while the third lot we received only a technically unsuitable offer and therefore the repechage mechanism was activated.

The MEAT award formula included a technical-economic 70-30 ratio. Following the award, in addition to the 2 consortia being awarded the small lots, the other 6 consortia awarded (5 of the large lots + 1 rescued for the third small lot) have either an Innovative SME or an Innovative Start-up.

In this way, for the next tenders, even small companies will be able to participate autonomously or in consortia, having some references that can be used in their name and not having to submit to the subcontracting mechanism that cancels the ownership of the reference itself as it is not the company that owns any direct contract with XXX.



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Procurement impact on growth

We find that winning a government contract has a significant effect on firm growth both during the quarter in which they win, as well as over the medium horizon. These effects are also **larger for younger firms**, conditional on size. Our estimates imply that winning at least one contract in a given quarter increases firm growth by a sizable 2.2 percentage points over the quarter, which is sufficient to move a firm located at the median of the firm growth distribution to the 75th percentile of the distribution.

These effects **persist** over time as firms experience growth for at least 2 years after winning a contract, which is well beyond the time when most government contracts have expired.

To further understand the long-lasting effects of government contracts, we use auction and firm level data to examine the behavior of firms that were close winners and close losers. We find that these persistence effects are, in part, attributed to firm **behavior in future auctions**. Firms that win a close auction participate in 30 percent more auctions over the next three months compared to those firms that barely lose.

Procuring Firm Growth: The Effects Of Government Purchases On Firm Dynamics by Claudio Ferraz, Frederico Finan and Dimitri Szerman, Working Paper 21219
<http://www.nber.org/papers/w21219>



Procurement and set asides impact

Why does winning a contract lead to such persistent effects? There are two broad explanations.

First, winning a government contract could be **providing information to the firm about the demand for its products**. As firms learn more about their demand over time, they decide to grow. In our setting, firms face uncertainty both in the demand for its products, as well as the marketplace itself. By winning a government contract, firms may start to realize that their products can be sold not only to their own local government, but to governments in neighboring municipalities and states.

Second, winning a government contract may **encourage firms to invest more** in organizational and human capital. If firms are credit constrained, then winning a government contract could allow firms to further invest in organizational upgrading. For example, firms may want to hire someone devoted entirely to managing the logistics of the online marketplace (i.e. bidding, finalization of the contracts, etc.). If firms reorganize their workforce or investment in more human capital in response to these demand shocks, they are likely to become more competitive and productive over time, which would explain the persistence in growth even after the contracts expire.



Procurement and impact

A country's efforts to promote MSME development through procurement policy can serve as an example of how outputs and targeted and achieved outcomes and impacts relate to each other. In this scenario, for example, a procurement output could be the introduction of a contracting set-aside to encourage MSME bids and awards. The corresponding ex ante procurement outcome would be a target of, say, 25 percent of all tenders awarded to MSMEs (however they are defined) by a given procuring agency in a given year. The ex post outcome might be, in fact, an actual (over-)achievement of 27 percent of contracts awarded to MSMEs. In this scenario, there would be no substantive gap. If the relevant procuring agency were unable to accurately measure the share of contracts awarded to MSMEs during the given period, or in ways that were not credible, a measurement gap would exist. Impact, in turn, would include whether there has been sustained, longer-term MSME development (such as capitalization and revenues) and increases in MSME-related employment and productivity, among other metrics relevant to the national economy under consideration.

<https://www.worldbank.org/en/events/2022/01/06/a-global-procurement-partnership-for-sustainable-development-an-international-stocktaking-of-developments-in-public-proc>



Rationale for Preferences

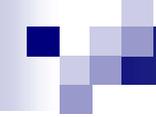
- 1) Insofar as the lack of competitiveness of small firms with respect to large firms is due to discrimination in **credit markets** (including as a consequence of delays of payment by governments), inefficiencies from subsidies are reduced.
- 2) **Dynamic competition** may make these inefficiencies vanish over time as subsidies today - that encourage small firms to sustain fixed costs and try to enter the public market by participating to tenders - increase the likelihood of unsubsidized entry tomorrow by **stronger to be candidates** (SME's that have become large/successful firms) and more competition makes cartels and corruption harder.
- 3) *"The immediate difficulty ... was the mismatch between the needs of government for specific goods and services and the industry distribution and limited capacity of most **MBEs**. Most were in the wrong lines of business and lacked, as well, the necessary expertise, working capital, and bonding capacity contractors needed to complete successfully all but the smallest government procurement tasks". (Bates). **Dynamic learning**. The Chicago case.*

Korean SMEs

SMEs can also benefit from a variety of special designations that are offered by SMBA, PPS and line ministries. Designation as an outstanding SME (for example, through certification for excellent technology or performance, or through designation as an innovative SME by SMBA) provides additional points in contract fulfilment capability tests, allowing such SMEs a competitive advantage. Designation as a supplier of an Excellent Government Supply Product allows for direct contracting, which can increase SME market share. The Excellent Government Supply Joint Brands designation allows direct contracting in a way that supports technology sharing, transfer and joint production among SMEs. These and other certification mechanisms will be examined in more detail below.

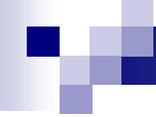
PPS also provides special financial support to SMEs involved in public contracting. SMEs are entitled to an upfront payment of up to 70% of the value of a government contract (see Table 4.5). For some contracts for goods, including orders against unit-price contracts, lump sum contracts for goods valued up to USD 423 800, or at the request of the end user for other goods contracts, the business is entitled to instant payment upon presentation of the invoice. In these cases, payment is made from the PPS special account and then reimbursed by the end user, as discussed in Chapter 2. Though central government entities are entitled to a payment period of up to five days, instant payment allows SMEs to receive payment within as little as four working hours.

Further liquidity support for SMEs in public procurement comes from a network loan programme. Under this programme, 15 commercial banks have partnered with PPS to offer terms that allow SMEs to obtain loans for up to 80% of the contract amount solely based on the contract with PPS, without any lien. This is a valuable means of support for SMEs without the financial standing to otherwise finance performance of public procurement contracts, and it has expanded substantially in recent years, reaching over 11 000 loans and nearly USD 400 million (see Table 4.6). Six institutions - including KIBO (Korea Technical Finance Corporation), Korea Federation of SMEs, Industrial Bank of Korea, Sinhan Bank, Hana Bank and Woori Bank - provide even more comprehensive support for SMEs in the form of warranties, loans and enterprise consulting. As of 31 December 2014, 1 223 warranties, loans and consultations were provided under this programme, for a total amount of USD 571 million.



Rationale for Preferences

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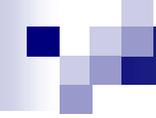
Most of all

Value for Money

What is Value?

«Each country will necessarily balance and pursue procurement-related policy objectives—whether transactional or strategic—in ways that maximize value for its own stakeholders. In other words, application of VfM is contextual and, therefore, potentially subject to wide divergence between and among countries depending on the relative mix of national socioeconomic priorities in each country.»

<https://www.worldbank.org/en/events/2022/01/06/a-global-procurement-partnership-for-sustainable-development-an-international-stocktaking-of-developments-in-public-proc>



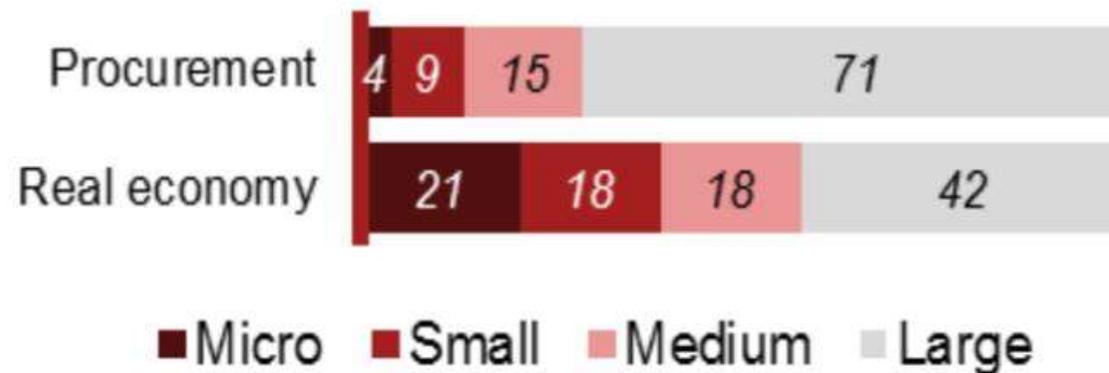
Procurement is all about

«Government procurement seeks to balance three *competing (?)* goals of **equity** (fair access to competing bidders), **integrity** (reduction in opportunities for corruption) and **economy** (obtaining goods, services or works required at the lowest possible price)».

https://digitalcommons.law.yale.edu/cgi/viewcontent.cgi?article=2520&context=fss_papers

Discrimination?

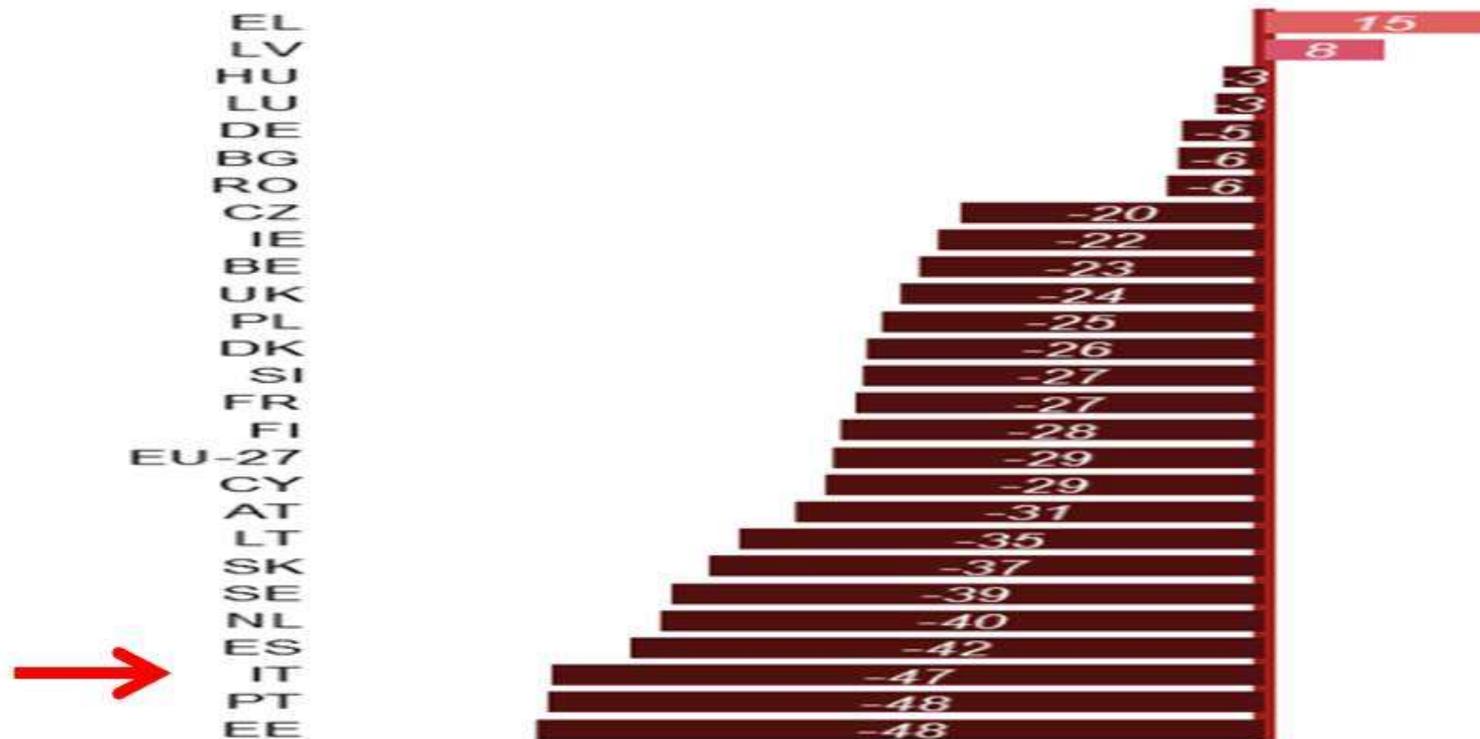
Exhibit 2-12: Difference between the share of SMEs in public procurement (average 2009-2011) and their role in the economy (EU-27)*



**Calculated on the combined gross value added in main economic sectors*

Different across Nations

Exhibit 2-13: Difference between the share of SMEs in public procurement and their role in the economy by Member State (average 2009-2011)



The Race



The Aussie Athlete, **James Gallaugh** recently (**2013**) completed the 200m run 0.08 secs faster than **the 14-year-old Bolt (2000)** registering 21.73 secs.

Google.com

Not this Race



Dont' let this race take place

The Empty Race



SC-026016 [RF] © www.visualphotos.com

The Meaningful Race



Usain Bolt and brazilian athlete Terezinha Guilhermina, fastest blind runner. 50 meters in 9:12 on the track o f the Brazilian Jockey Club di Rio de Janeiro, at the event «Hand in Hand Challenge».



The future of preferences?

Some discrimination may disappear (thanks also to preferential procurement).

Some new discriminations may not be tolerated anymore (and require new preferential procurement) by future generations!



WASTE

Measuring ? in Procurement

L'utilizzo delle risorse per la costituzione dello stock di capitale pubblico

Regione	Inventario permanente / inventario fisico (con correzione per le differenze di costo)
Umbria	1.77
Emilia-Romagna	1.66
Toscana	1.56
Liguria	1.55
Marche	1.42
Lombardia	1.42
Piemonte	1.35
Veneto	1.15
Friuli Venezia-Giulia	1.02
Lazio	1.02
Abruzzi	0.86
Puglia	0.80
Sicilia	0.74
Sardegna	0.55
Campania	0.54
Calabria	0.49
Molise	0.45
Basilicata	0.39

Lucio Picci's work.

In every Italian region
spending was 100?

In Umbria 1.77 bridges, in
Sicily 0.74.

P.S.: why this **waste**?



Italy, Goods and Services

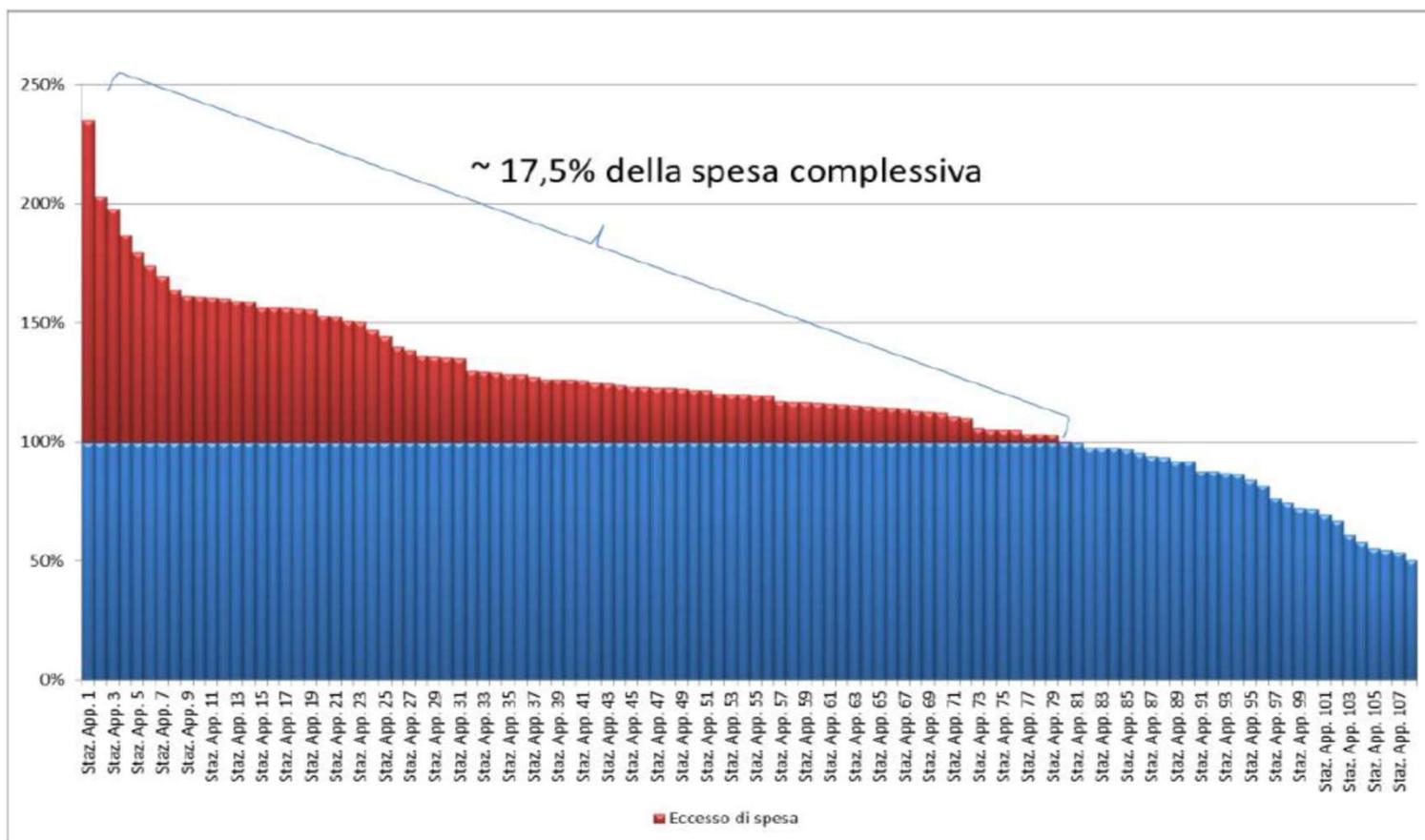
How Much Public Money Is Wasted, and Why? Evidence from a Change in Procurement Law -
Oriana Bandiera, Andrea Prat, Tommaso Valletti, *American Economic Review*

How much **waste** in **purchases** could be eliminated by bringing “the worse at the level of the best”? “If all public bodies were to pay the same prices as the one at the 10th percentile, sample expenditure would fall by 21% . . . Since public purchases of goods and services are 8% of GDP, if sample purchases were representative of all public purchases of goods and services, savings would be between 1.6% and 2.1% of GDP!”

p.s: worldwide phenomenon

Understanding Waste

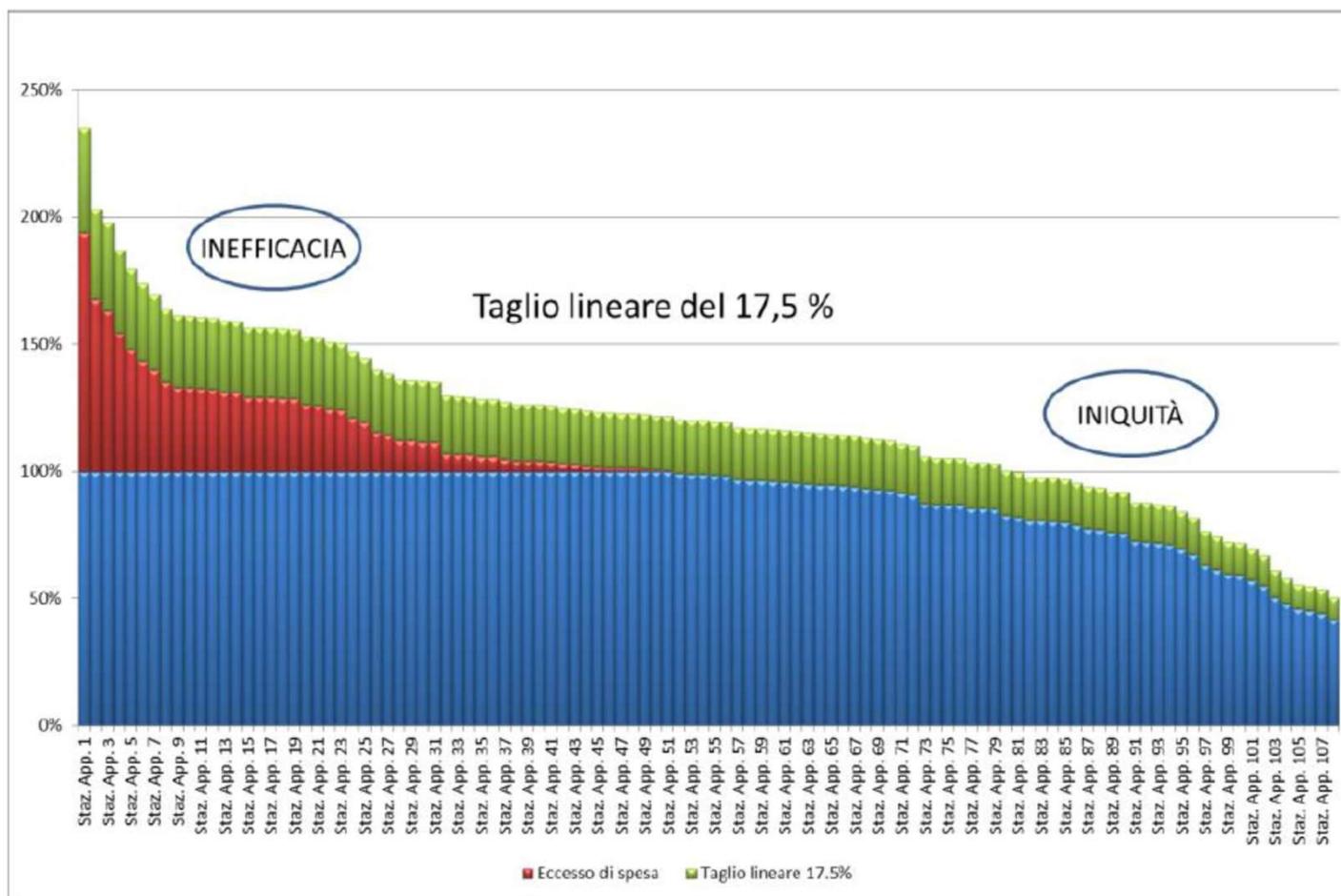
Figura 11.1 Eccesso di spesa imputabile alla componente prezzo.
Stime relative al servizio di pulizia in ambito sanitario (2015)



Fonte: ANAC

Understanding Waste

Figura 11.2 Eccesso di spesa imputabile alla componente prezzo e tagli lineari.
Stime relative al servizio di pulizia in ambito sanitario (2015)



Fonte: ANAC



Understanding Waste

- Spend 600 euro
 - 400 + 200 for 2 identical ambulances
 - Stop the 400 purchase
 - Cut spending at 400
 - No impact on unemployment or real GDP
 - Cut? In transfer
 - Resource? 200 for...
 - Lower taxes
 - Third ambulance
 - Reducing debt
- Spend 600 euro
 - 200 + 200 + 200 for 3 identical ambulances
 - Stop one 200 purchase
 - Cut spending at 400
 - Impact on unemployment or real GDP? Yes.
 - Cut? In spending of third ambulance



Bandiera, Prat and Valletti

American Economic Review 2009

How much of this waste is **passive** (inefficiency [and capture from ignorance?]) vs. **active** (corruption)? “On average, at least 82% of estimated waste is passive and that passive waste accounts for the majority of waste in at least 83% of our sample public bodies.”

Good news! Corruption is harder to eradicate than ignorance.

Ignorance can be eradicated, with knowledge-sharing practices.

The Carabinieri's story



P.S.

Corruption and Incompetence in
Procurement are strategic complements:
corruption makes competence valued less
and incompetence makes corruption work
better.

Foster Competence Building!
To be continued.



Waste (USA)

A one standard deviation increase in competence reduces cost overruns by 29 percent and the number of days of delay by 23 percent. It also reduces by half the number of renegotiations. This implies that, if all federal bureaus were to obtain NASA's high level of competence (corresponding to the top 10 percent of the competence distribution), delays in contract execution would decline by 4.8 million days and cost overruns would drop by \$6.7 billion over the entire sample analyzed.



Solutions to waste

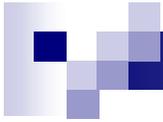
Cooperation in the bureau seems to be by far the **most important component of bureau competence** in terms of the effects on procurement performance. This result is ... linked to the complexity and multidisciplinary nature typical of procurement. The need to master legal, engineering, economic/strategic and mercological skills for different types of goods, works and services and to coordinate the various phases of the procurement cycle (market analysis, tender design and implementation, contract management and evaluation) makes **good procurement primarily the outcome of team-work**. Cooperation among employees is therefore a crucial ingredient for a well functioning procurement office.

Existing certification programs, however, have mainly targeted individual contracting officers. Our results on the role of cooperation suggest that, **while certification of individual contracting officer's capabilities is certainly welcome and important, it may not be sufficient**.

BUREAUCRATIC COMPETENCE AND PROCUREMENT OUTCOMES

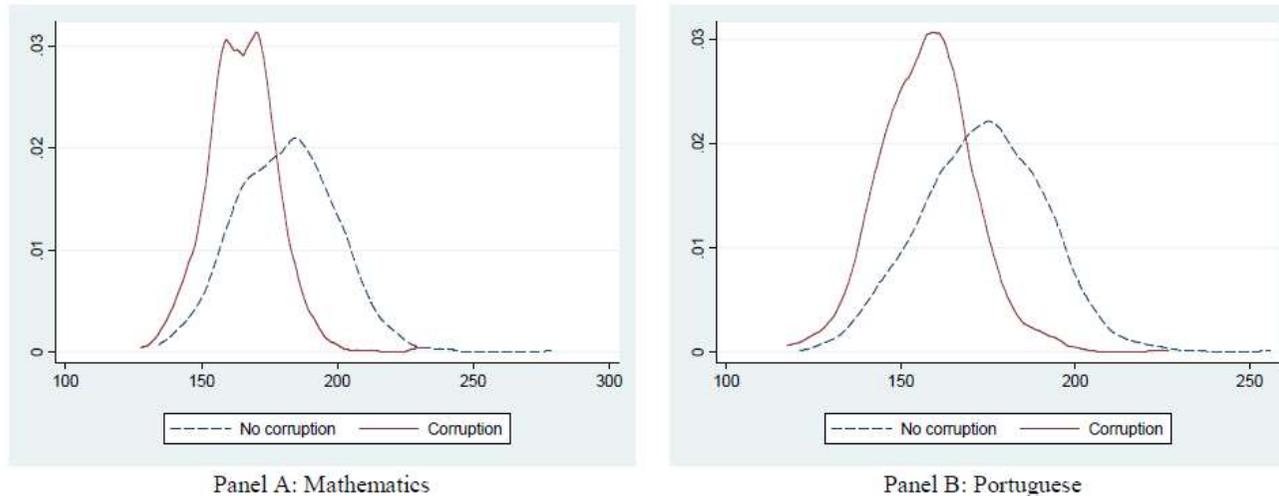
Francesco Decarolis, Leonardo M. Giuffrida, Elisabetta Iossa, Vincenzo Mollisi and Giancarlo Spagnolo

Working Paper 24201, <http://www.nber.org/papers/w24201>



CORRUPTION

The ravages of corruption? All that will never exist because of it



In blue: States with No Corruption

In red: States with Corruption.

Ferraz Finan and Moreira find that:

- Where corruption is higher, lower are the school results of students (15% less in GPA) and their capacity to finish their study (3% lower rate of graduation).
- In the corrupt regions on average 11% less teachers receive education.



Culture matters?

- The Role Played by our Heritage.
- United Nations Diplomats in New York: Parking Habits.
- Benefits are the Same across Countries, but Costs?
- Data! Kuwaitian: 526 fines in 2000 (not only close to the UN!). Norwegian or Swedish: 0 fines.



Dont' Fight It: Useless

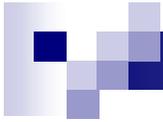
- **What does a Mayor learn from his first term in Office? Italy, 2000-2005.**
- **The longer the years in office, the lower the number of participants to the tenders, the lower price discounts.**
- **2.8 years of political longevity reduce the number of tender participants by at most 14% and discounts by 1.6 to 8%.**
- **For 500.000 euro tenders, a mayor with long tenure spends 10.000 euro more than a novel mayor. The long tenure mayor sees an increase of 24.5% probability that the tender is allocated to a local firm.**

(Coviello-Gagliarducci)



But ... (Ferraz-Finan)

- The reduction in corruption practices induced by **electoral accountability** is not only statistical significant, but economically important.
- Assuming that, in the absence of reelection incentives, first-term mayors would behave as second-term mayors, we estimate that reelection incentives are responsible for inducing a reduction in resources misappropriated in the order of R\$600 million (US\$205 million).
- Accountability affects incentives (to be continued).



DEFINING CORRUPTION

What is Corruption? Soreide (2005)

<i>LEGAL</i>				<i>LEGAL GREY ZONES</i>					<i>ILLEGAL</i>
<p>Honest and professional business conduct</p> <p>Ordinary marketing</p> <p>Marketing targeted at specific individuals: exclusive excursions, sports tickets, gourmet evenings, etc.</p> <p>Unsolicited proposals, with all details of an unplanned project prepared</p> <p>Middlemen and agents, "personal relationship is what counts"</p> <p>Gifts to political parties – by condition of a certain benefit</p> <p>Quid pro quos – a way of covering corruption?</p> <p>"Facilitation payments" – "to get the procedures going"</p> <p>Bargaining on opportunities for reconcessioning (profitable solutions for the firm)</p> <p>Violations of rules of communication (as if they were not important)</p> <p>Persuade politicians at home to put pressure on local govns. (difficult to prosecute)</p> <p>Acquire secret information about evaluation, use of "fronts"</p> <p>Misuse of "facilitation payments" (makes corruption "less illegal")</p> <p>Expensive gifts to people involved in the tender procedure</p> <p>Buy secret information about competitors' bids</p> <p>Local partnership with relatives of people with authority</p> <p>Bribes to individuals with influence on the procedure</p>									

UK Bribery Act, 2010



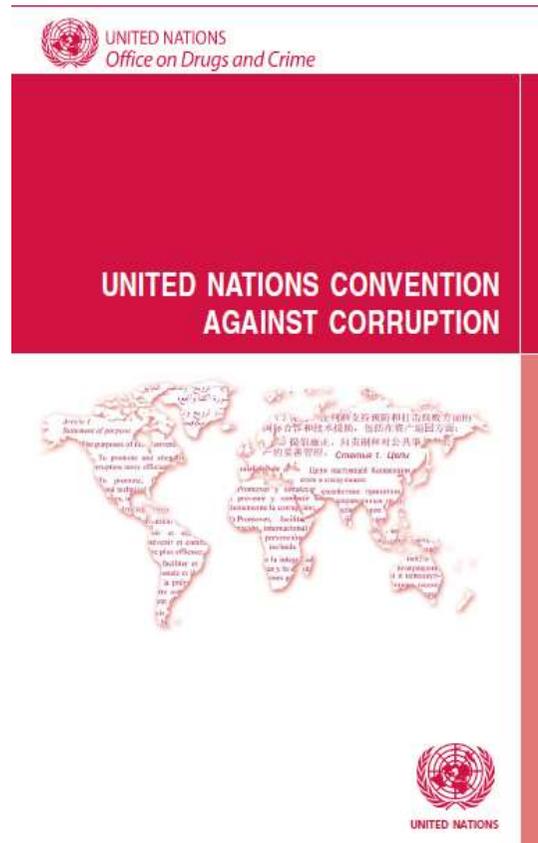
Bribery Act 2010

CHAPTER 23

1 Offences of bribing another person

- (1) A person (“P”) is guilty of an offence if either of the following cases applies.
- (2) Case 1 is where—
 - (a) P offers, promises or gives a financial or other advantage to another person, and
 - (b) P intends the advantage—
 - (i) to induce a person to perform improperly a relevant function or activity, or
 - (ii) to reward a person for the improper performance of such a function or activity.
- (3) Case 2 is where—
 - (a) P offers, promises or gives a financial or other advantage to another person, and
 - (b) P knows or believes that the acceptance of the advantage would itself constitute the improper performance of a relevant function or activity.
- (4) In case 1 it does not matter whether the person to whom the advantage is offered, promised or given is the same person as the person who is to perform, or has performed, the function or activity concerned.

What is Corruption?



No definition



UN Convention Definition (of Bribery!)

- “(a) The promise, offering or giving, to a public official, directly or indirectly, of an undue advantage, for the official himself or herself or another person or entity, in order that the official act or refrain from acting in the exercise of his or her official duties; (b) The solicitation or acceptance by a public official, directly or indirectly, of an undue advantage, for the official himself or herself or another person or entity, in order that the official act or refrain from acting in the exercise of his or her official duties.” (article 15).

Semantics

Definition that seems to imply:

- essentially a **bilateral relationship**;
- the existence of a “**First Mover**”;
- An almost “**contemporaneous**” exchange.



It does little to perimeter around **systemic corruption**

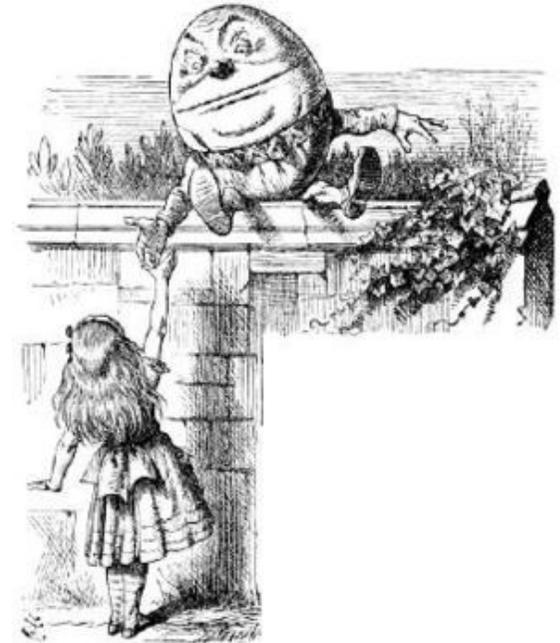
Does it Matter to Define Corruption in Procurement?

- No. Lambdsorff (2007).

“Still some researchers display their endeavors in this area. They are willing to go into time-consuming debate and are fierce in preferring one approach to another.

Such debate, however, tends to absorb much of desperately needed elsewhere”.

- Yes. Humpty Dumpty (1871).





Definitions - 1

`When I use a word,' Humpty Dumpty said, in rather a scornful tone, `it means just what I choose it to mean -- neither more nor less.'

`The question is,' said Alice, `whether you can make words mean so many different things.'

`The question is,' said Humpty Dumpty, `which is to be master -- that's all.'

Through the Looking-Glass, and What Alice Found There (1871), Lewis Carroll



Definitions evolve

- **World Bank:**

“the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions **of another party**” .

(before: **public official in the procurement process or in contract execution**”).



Definition

Misuse of public **power** [in procurement]
for private benefits.

Lambdsorff (2007)

**Both politicians and
bureacrats alike**



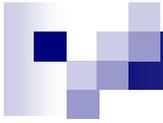
Definition

Misuse of public power [in procurement] for private benefits.

Lambdsorff (2007)

No reference to specific time or specific exchange nor to two main individuals.

Beyond Bribery toward Corruption: Bribery AND Cronysm, Patronage....



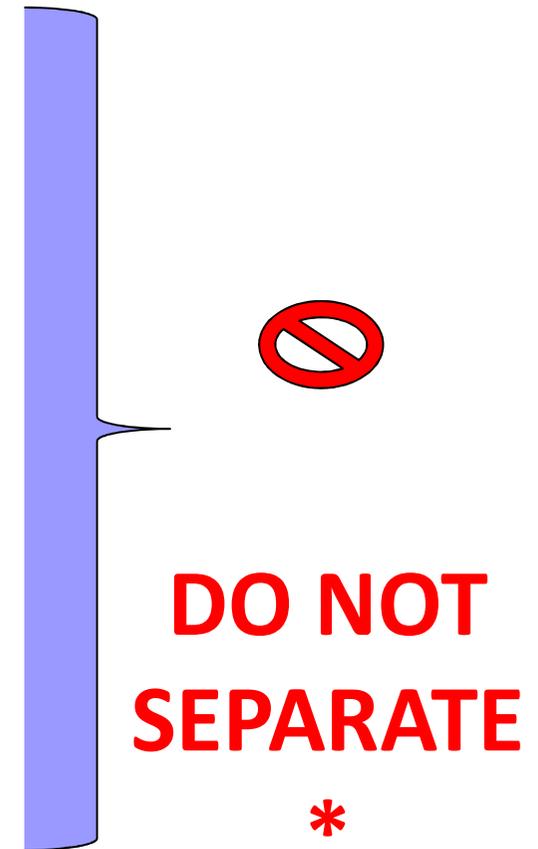
CORRUPTION IN PROCUREMENT

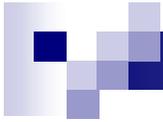
Key Moments in Procurement

Q^s . Demand Management.

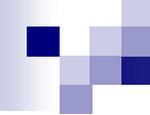
$P^s \times (Q + \Delta Q^p)$. Sourcing .

$P \times (Q - \Delta Q^e)$. Supply Management.





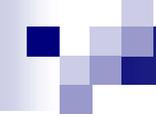
DEMAND MANAGEMENT



Estimating Need

Tender specifications is an Important Channel of Corruption/Collusion.

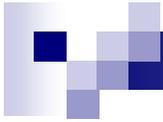
- Soreide: “41% of the firms said that tender specifications happen to be designed to fit the offer of one specific company”.
- Kosenok and Lambert-Mogiliansky show that **favoritism** facilitates collusion because ‘it induces ... the selected contract specification reflecting the cartel’s interests instead of social preferences’.
- They find that overall favoritism ‘exacerbates the cost of collusion for society. The contract specification is socially inefficient and the price is higher than with collusion alone’.
- So do Scoring Rules appropriately targeted to specific firm’s characteristics.



Tender specifications matter. Favoritism

- Once upon a time, the Department of the Interior decided it wanted to move to the cloud, and issued a procurement request asking vendors to send it bids, as is typical with government procurements. However, in the fall of 2010, Google filed suit against this process, noting that it required any bidder to be compliant with Microsoft's Business Productivity Online Suite — needless to say, a provision with which only Microsoft products could comply. This is typically thought to be a no-no in government procurements.
- Google has ended up being awarded a gigundo contract to supply Google Apps to the U.S. Department of the Interior, over Microsoft. Google withdrew its lawsuit in September 2011 after the Interior Department relinquished its rights to the Microsoft contract, claiming the research it used in picking Microsoft was “stale.”
- The contract provides email and collaboration software to 90,000 Interior employees, for \$34.9 million over seven years -- or \$14 million less than Microsoft would have been paid.

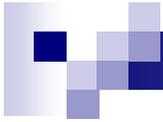
<http://blogs.wsj.com/cio/2012/05/01/google-defeats-microsoft-in-epic-battle-of-department-of-interior-email-contract/>



SOURCING

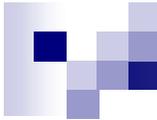
An Example. Where is Corruption? The Envelope





The Workings of C.: my brother won already





The Workings of C.: my brother does not win



MY BROTHER



COSTS OF B.



THE WINNER



**COSTS OF
WINNER**



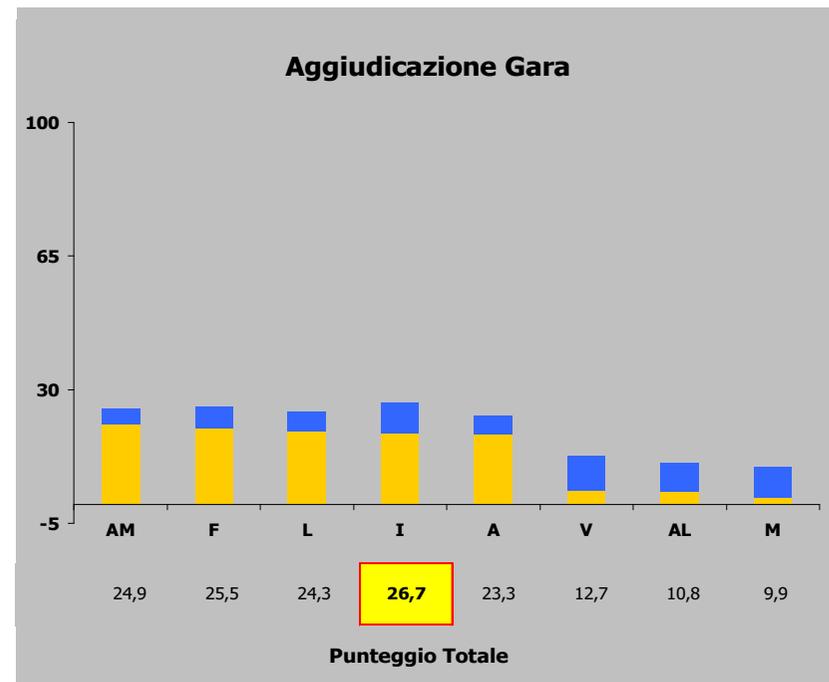
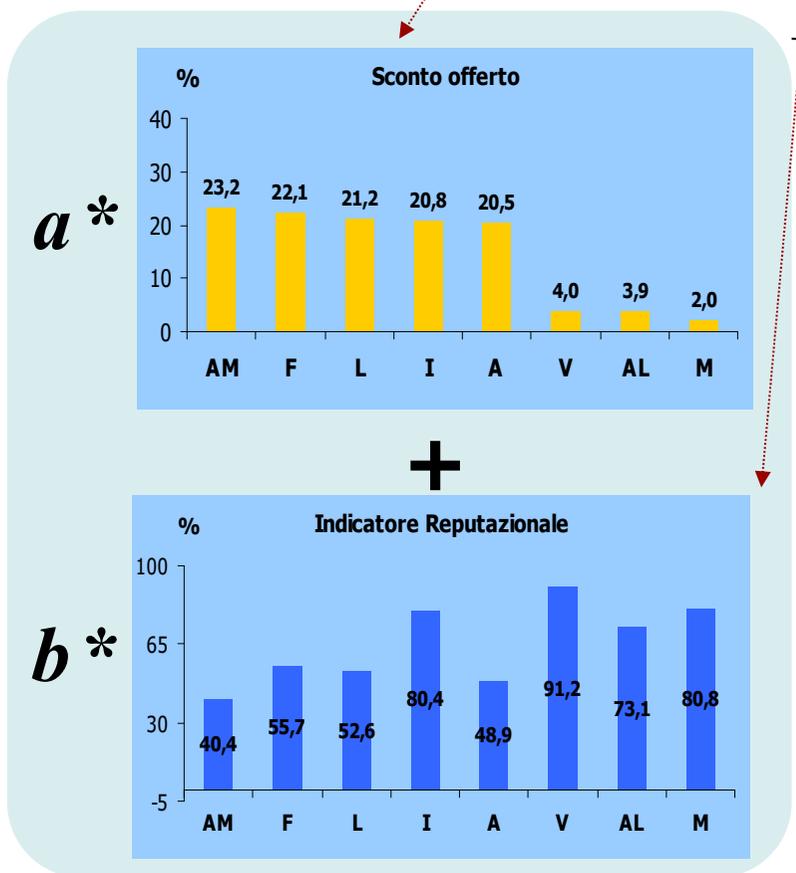
Another invisible impact

Corruption Impact Must Also be Evaluated Taking Into Account its Invisible Effects

- a) Distortion in MEAT criteria towards less points to quality and more to price;
- b) [N]arrowing discretion . . . while preventing the agent from doing (corrupt) things that are slightly injurious to the principal it may at the same time prevent him from doing (non- corrupt) ones that would be very beneficial to him. If simply to prevent corruption an agent is given a narrower discretion than would be optimal if there were no corruption, whatever losses are occasioned by (lower) discretion must be counted as costs of preventing corruption.

Ex. 2: A criterion that rewards reputation but....

$$\text{Punteggio} = a \frac{P_B - P_O}{P_B} + b * IR$$



Con i parametri della formula che assumono i seguenti valori:

- $a = 90$
- $b = 10$
- $PB = \text{€ } 250.000$

Ex. 2: A criterion that rewards reputation but....

a^*



+

b^*

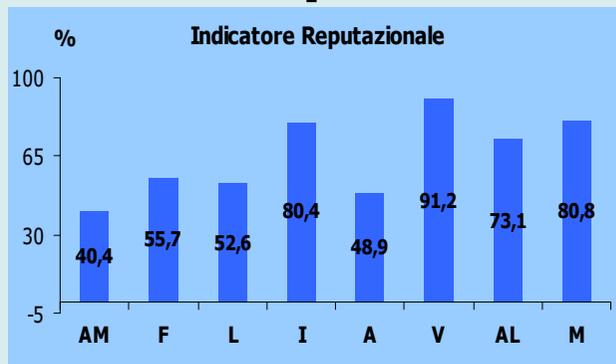
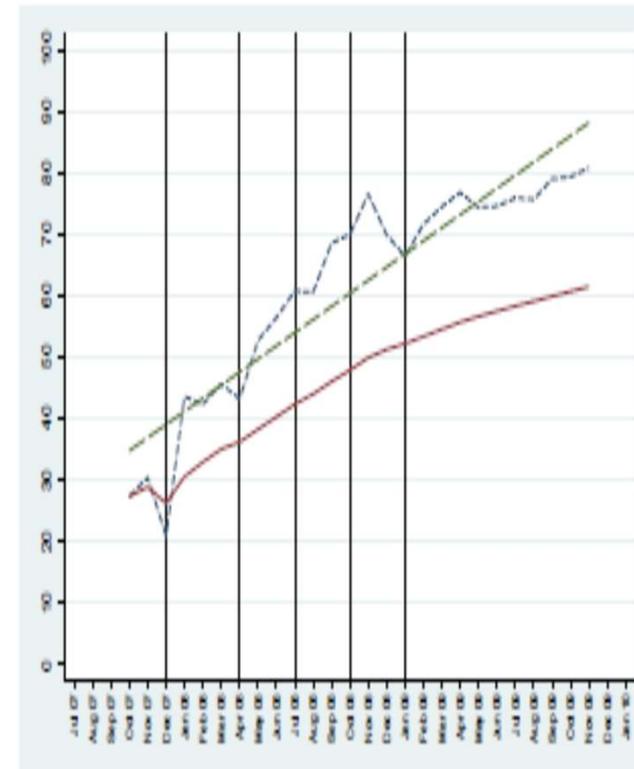
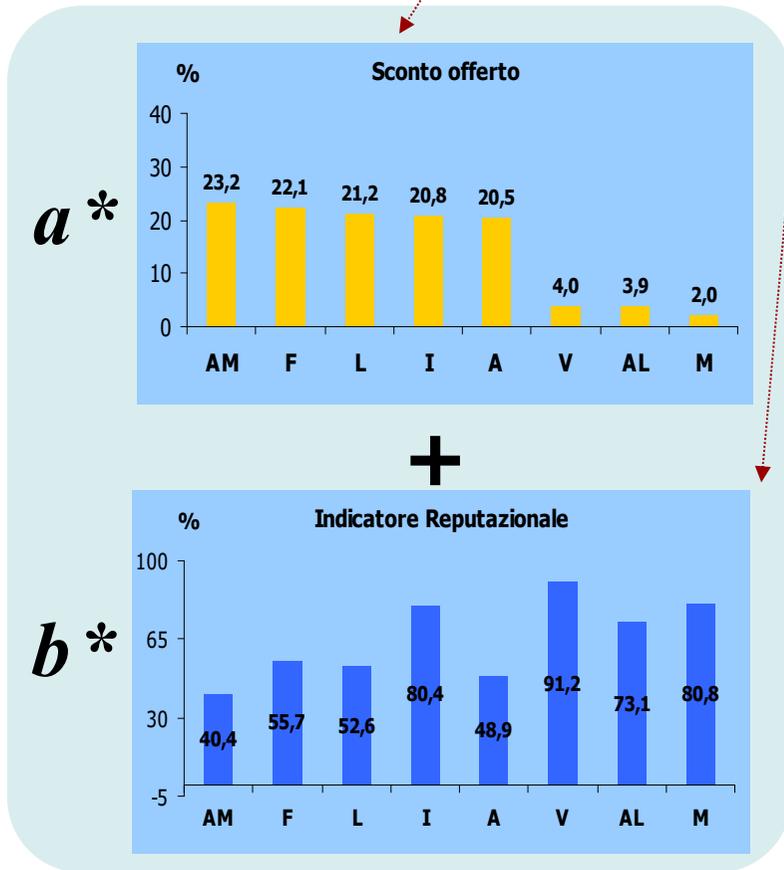


Figure 1: Monthly Overall Reputation

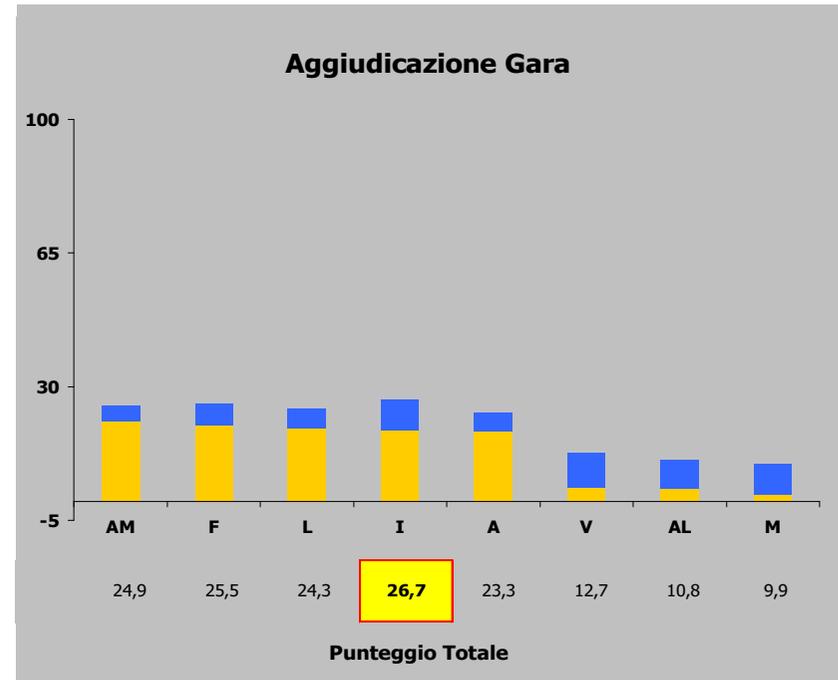


Ex. 2: A criterion that rewards reputation but....

$$Punteggio = a \frac{P_B - P_O}{P_B} + b * IR$$



Sensitive to inspector capture



Con i parametri della formula che assumono i seguenti valori:

- $a = 90$
- $b = 10$
- $PB = \text{€ } 250.000$

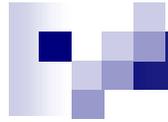


Discretionality in the new EU Directive

More discretionality allowing to negotiate more frequently (except for standardized goods)

- Negotiation can help because:
 - a) in the case of complex operations, it has the potential to improve the fine-tuning of contracts by helping the public party to express its needs and by identifying unforeseen competitive and potentially innovative solutions;
 - b) at the selection stage it reduces the likelihood of the contract being renegotiated at a later date, without necessarily increasing prices;
 - c) contractors are required to justify the various components of their bids at the negotiation stage, which reduces the risk of collusion and cover bids;

But there are risks: **favoritism**, raising price anticipating ex-post negotiations, improving (and copying) one's rival technical offer.



SUPPLY MANAGEMENT

Waste: Working with Overrun Data (Flyvbjerg)

Project	Cases	Average Cost Overrun %	Inaccuracy of demand forecast
Rail	58	44,7	-51,4%
Bridges and Tunnels	33	33,8	
Road	167	20,4	

Boston's Big Dig Tunnel:

275%
(111 bn. \$)
over budget
when it
opened.



Working with Overrun Data (Flyvbjerg)

Cost overruns generate:

- a) Waste due to inferior projects being awarded;
- b) Delays;
- c) Destabilize policy action and public finances.

Causes?

Over-optimism or Deliberate Strategic Deception?



Deception or Corruption? Some interviews

- «You will often as a planner know the **real** costs. You know that the budget is too low, but it is difficult to pass such a message to the ... politicians and the private actors. They know that high costs reduce the chances of national funding.»
- « The system encourages people to focus on the benefits – because until now there has not been much focus on the quality of risk analysis and the robustness of projects. It is therefore important for project promoters to demonstrate all the benefits, also because **the promoters know that their project is up against other projects and competing for scarce resources.**»
- « Most decent **consultants** will write-off obviously bad projects, but there is a **grey zone** and I think many consultants in reality have an incentive to try to prolong the life of the project which means to get them through the business case. It is in line with their need to make a profit.»

Project Approval Stage is critical moment. Is it Corruption?



Discretionality in the new EU Directive

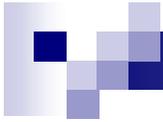
Greater space for renegotiation

(with upper limits based on share of value)

- Renegotiation can help: unforeseen events, new advantages

But:

Renegotiation can reduce the benefits of competition: he who wins **is the best renegotiator** (with a very low, renegotiable, price) rather than the best quality provider.



CORRUPTION AND COLLUSION



Let's not forget!

- If Why?
 - a) 2 lots for 2 firms;
 - b) 1 lot, allowing temporary consortia or sub-contracting among large firms;
 - c) 12 firms, 12 3-month contracts instead of 1 36-month contract
 - d) 1 large 5-year contract instead of dual sourcing;
 - e) Choose a high base price or a descending price auction when cartels are around.



What do we Know about Collusion?

Corruption and Collusion are strategic complements.

a) Collusion benefits from corruption:

- To make defection harder or impossible;
- To make cartels even more profitable.

b) Corruption can be facilitated by collusion

- Rents (extra profits) are resources for corruption.
 - Lower probability to blow the whistle against corrupt officers.
-
- Ps: Mafia and corruption too

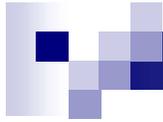
What do we Know about Collusion?

Cartel	Frequency
Only Cartel	29%
Cartel and Corruption	24%
Cartel Corruption, Criminality	32%
Other	15%
Totale	100%

*Analysis of final judgments by High Court (Cassazione)
(2016-2020)
Iossa, Raganelli (2023)*

Winner is: the best BRIBE offerer

	No Corruption	Infinite Bribes Possible CARTEL	Only Finite Bribes Possible (Risk) CARTEL	What if one FIRM cannot bribe?	Corrupt officer can choose winner beyond minimum price CARTEL
Government	R	0	0	R	0
Firms	0	0	R-B	0	R-B
Bureaucrat	0	R	B	0	B
Price	Best Marginal Cost	Reservation Price	Reservation Price NOT P + B	Best Marginal Cost	Higher than Marginal Cost
Bribe	0	Reservation Price - MC	$B <$ Reservation Price - MC	0	B



DEFEATING CORRUPTION IN PROCUREMENT



Statement number 1

(Good) Ethical Codes and (Good) Ethical Training do Matter

- Not for all, but for those who Socrates was thinking of.
- And anyway they introduce some hurdles also for the bad guys.
- Huge amortization of fixed costs **centralizing** ethical codes and leaving out only issues arising from internal organization specific characteristics.
- And, while we are it



Rules?

- Evidence: (Soreide 2005) “procurement rules are important, though not in themselves a good anti-corruption tool. In fact, as many as 55% of the respondents did not think that tender rules could prevent corruption. Fifteen percent said that **tender rules do function as an obstacle**, while only six percent considered tender rules to be an efficient obstacle to corruption.”



But ...

***Rule-driven Transparency Matters,
after All***

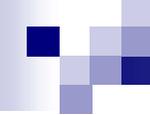
- 1) Yes, rules deprive competence-building , innovation and may decrease accountability.
- 2) But ... Mie Prefecture of Japan had had been using opaque and discretionary practices while qualifying suppliers for bidding for small-scaled public-works projects. Switched to more transparency and 8% lower costs! *Review of Industrial Organization.*



What do we Know about Corruption?

Some things that do not fight corruption inequivocally well

- a) Rotating Officers/Commissioners
- b) Central Purchasing Bodies
- c) E-procurement (an instrument, like a knife: is a knife useful?)



Centralization – The Bulgarian example

- “The Bulgarian Cabinet has appointed Finance Minister Simeon Djankov in charge of all public procurement procedures handled by the state. “Minister Djankov becomes the Central Unit for Public Procurement,” states the government’s decision made Wednesday the rationale for the decision being that the new arrangement will help reduce spending and corruption when it comes to tenders.

The centralization of the public procurement procedures is supposed to save money and to hinder corruption schemes.”

<http://www.publictendering.com/corruption-costs-make-bulgarian-minister-take-over-public-procurement/>

1 Big Bribe instead of 1000 small ones? The Consip case



Statement # 2

*The paradox of the right solution.
It works best there where needed the least.*

Anticorruption Authorities

Michela Wrong – *It is Our Turn to Eat*

Whistleblowers

Søreide (2008)

firms will not engage in whistleblowing against corruption- related challenges in the local business climate unless local levels of corruption are considered to be low



Statement #3

Fighting Cartels can be one of the Best Tools to Fight Corruption

- **If Authorities are not Captured.**
- **Strengthening legislation penalties against cartels might be a good idea.**
- **Cooperation Between Antitrust and Procurement Authorities.**
- **But, it is almost impossible for small procurers to identify cartels and for large procurers to blow the whistle at them (risk-aversion).**



Statement # 4

Fighting Cost Overruns

Subject demand and cost forecasts to independent peer review

Benchmark forecasts

Make forecasts and benchmarks and peer reviews public

Penalize planners/forecasters that are consistently biased

Make forecasters share financial responsibility



The New Solution?

Grassroots Monitoring

- * Olken (2007) shows however that increasing grassroots participation in monitoring has little impact, due to elite capture and free-rider problems.
- * But, the Web distances the principal from the agent and increases the number of principals, changing the bargaining power.
- * Web-based solutions are becoming more widespread. Brazil is possibly the best example.
- * Concept of **Social Stigma** at work.



The New Solution?

Grassroots Monitoring

*Danger of statistical incompetence by managers of datawarehouse and grassroots movements.

“High Prices are often Good Quality”

*Undesired consequence of pressure on public employees, that are inherently risk-averse, to innovate.

*Basic Concept behind it: lack of **trust**, stigma. Followed by lack of productivity?



TRUST



Glauco or Socrate in Russia

Who can avoid to do evil to another being for its own gain if he is not or badly monitored?

Repubblica, Plato

- Socrates: **all**,

Man chooses always to do good and if he does evil it is only by intellectual mistake. Justice, indeed, gives happiness to those who exert it.

- Glaucon” (Gige’s Myth): **no one**,

Injustice provides more joy than justice.

Is it an issue of human nature? Or also **of incentives?**
And of **trust?**



A European (?) Directive

... that introduces more **discretionality** for public buyers.

Why?

United Kingdom.

- 0) The Crisis = political support
- 1) Organization: career structure and incentives
- 2) Professionalization
- 3) Accountability (with data)
- 4) Trust (the competitive **dialogue** signal)
- 5) Discretionality as a need/necessity**
- 6) The EU Directive = The Law



Internal Knowledge-Sharing UK 2009

Recommendations:
“Attract, Reward, Retain and
Develop”.



A European (?) Directive

Same
Directive,
Different
Law

Imagine a country with ...

- 0) No ... crisis
- 1) With «rotation» of employees
- 2) No resources for employees nor for data
- 3) Maybe a **law** encouraging professionalization (but no ... €)
- 4) Without competitive **dialogue**
- 5) **With discretionality as fear/headache**
- 6) The Law ≠ The EU Directive



7 years ago...



Strasbourg, 3.10.2017
C(2017) 6654 final

COMMISSION RECOMMENDATION

of 3.10.2017

on the professionalisation of public procurement

Building an architecture for the professionalisation of public procurement

(Text with EEA relevance)



A revolution in the making?

I. **Policy** ... Developing the appropriate policy **architecture** for professionalisation: to have a real impact, any professionalisation policy should count on **high level political support**.

II. **Human Resources** ... must have the **right qualifications**, training, skills and experience needed for their level of **responsibility**. This means **securing** experienced, skilled and motivated staff, offering the necessary **training** and continuous professional development, as well as developing a **career structure** and **incentives** to make the public procurement function **attractive** and to **motivate** public officers to deliver on strategic outcomes.

III. **Systems** ... ensuring the availability of **tools** and **processes** to deliver smart procurement, such as: e-Procurement tools, guidelines, manuals, templates and **cooperation** tools, with corresponding training, support and expertise, **aggregation of knowledge** and **exchange of good practice**.



Again...

Cooperation in the bureau seems to be by far the **most important component of bureau competence** in terms of the effects on procurement performance. This result is ... linked to the complexity and multidisciplinary nature typical of procurement. The need to master legal, engineering, economic/strategic and mercological skills for different types of goods, works and services and to coordinate the various phases of the procurement cycle (market analysis, tender design and implementation, contract management and evaluation) makes **good procurement primarily the outcome of team-work**. Cooperation among employees is therefore a crucial ingredient for a well functioning procurement office.

Existing certification programs, however, have mainly targeted individual contracting officers. Our results on the role of cooperation suggest that, **while certification of individual contracting officer's capabilities is certainly welcome and important, it may not be sufficient.**

BUREAUCRATIC COMPETENCE AND PROCUREMENT OUTCOMES

Francesco Decarolis, Leonardo M. Giuffrida, Elisabetta Iossa, Vincenzo Mollisi and Giancarlo Spagnolo

Working Paper 24201, <http://www.nber.org/papers/w24201>



What does cooperation require?

Internal Trust

Open and honest communication;

Acting ethically has priority;

No fear of reprisal for reporting misbehavior;

Encouragement and promotion of diversity of backgrounds, talents and perspectives;

Genuine effort to elicit opinions and thoughts of workers;

Coherence of senior leadership with company's communication pillars.



Trust, the virtuous circle

Inhibiting trust:
Quis custodiet ipsos custodes?
(Kenya story)

The virtuous
circle of trust

Who/What activates trust?
Primum movens?

«The fish smells from the head»?

Leadership and...?



Statement # 5

Centralize Data but...

1) ... not procurement

2) ... not (necessarily) publishing them to a wide audience?



Korea's KONEPS e-proc system

The degree of transparency in public procurement in Korea has also been greatly expanded by KONEPS. Real-time disclosure of tender notices, bidding details and results, awarding information and contracting information is now available. On a per-contract level, the general public can track the history of each transaction, from tendering through to invoicing. Publication of all tender notices through KONEPS also allows for ready comparisons of terms and conditions, and tenders published by PPS also require a five-to-seven-day advertisement for preliminary specification review. This period allows for challenges to tenders that may contain unnecessarily restrictive terms and conditions, which fosters fair and open competition. Such challenges and any responses are also publicly available.

This increased data collection and consolidation also yields benefits for strategic planning and **accountability**. Public buyers have access to procurement records to a



Statement # 6

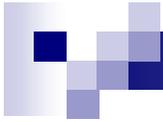
Foster Organizational Change Toward Performance

- Use Data for Internal Improvement
- Use Data for Setting Targets, Motivations, Rewards
- Use Data that are oriented toward output-based measurement of **performance**
- Organize Institution **Around Self-Improvement.**
- **The Philippines** example stands out as a potential benchmark:

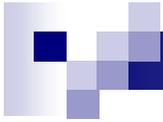


A comprehensive approach

- *The results should **not be used to compare** the agency's score against that of other agencies but to provide a benchmark **against which it will measure its own subsequent performance**. The assessors shall then identify areas of strength (sub-indicators receiving a satisfactory or Very Satisfactory score) where it can continue to improve and weaknesses (sub-indicators rated poor or acceptable) where it needs to develop a specific plan of action.*
- ***A Plan of Action** to Improve Procurement Capacity will then be developed ...*

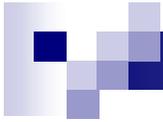


SUMMING UP



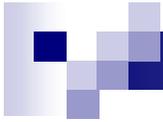
**Tale of
2
countries**

	RULES	DISCRETION
TRUST		HIGH (GOOD) EQUILIBRIUM
NO TRUST	LOW (BAD) EQUILIBRIUM	



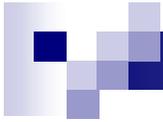
Tale of 1 journey

	RULES	DISCRETION
TRUST		HIGH (GOOD) EQUILIBRIUM
NO TRUST	LOW (BAD) EQUILIBRIUM	



Tale of 2 countries

	Low Competence	High Competence
Low Corruption		GOOD EQUILIBRIUM
High Corruption	BAD EQUILIBRIUM	



**Tale of
1
journey**

	Low Competence	High Competence
Low Corruption		GOOD EQUILIBRIUM
High Corruption	BAD EQUILIBRIUM	REWARDING COMPETENCE

A red arrow points upwards from the 'BAD EQUILIBRIUM' cell to the 'GOOD EQUILIBRIUM' cell. A green arrow points from the 'BAD EQUILIBRIUM' cell to the 'REWARDING COMPETENCE' cell.

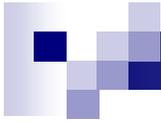


“Investing in the function tasked
with delivering these
(**efficiency**) targets is a clear
spend to save business case”

**In one
quote?**

OGC (UK) presentation, Rome,
September 2009

Other country? **Save to spend (badly)**



Spending to Save

How much?

$\geq 2\%$

Why?

$\leq 83\%$

How Much Public Money Is Wasted, and **Why?**
Evidence from a Change in Procurement Law - Oriana
Bandiera, Andrea Prat, Tommaso Valletti, American
Economic Review

Summing Up





History, again

«To those unbridled excesses of wicked men, to the daily protest of the Roman citizens, to the disrepute of the judicial system, I assert that the following is the only remedy to so many evils: competent and honest men that embrace the cause of the State and of the rule of law».

Conjectural speech against Quinto Cecilio, Cicerone



THANK YOU