

Public Procurement: an Economist's Perspective

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Key messages

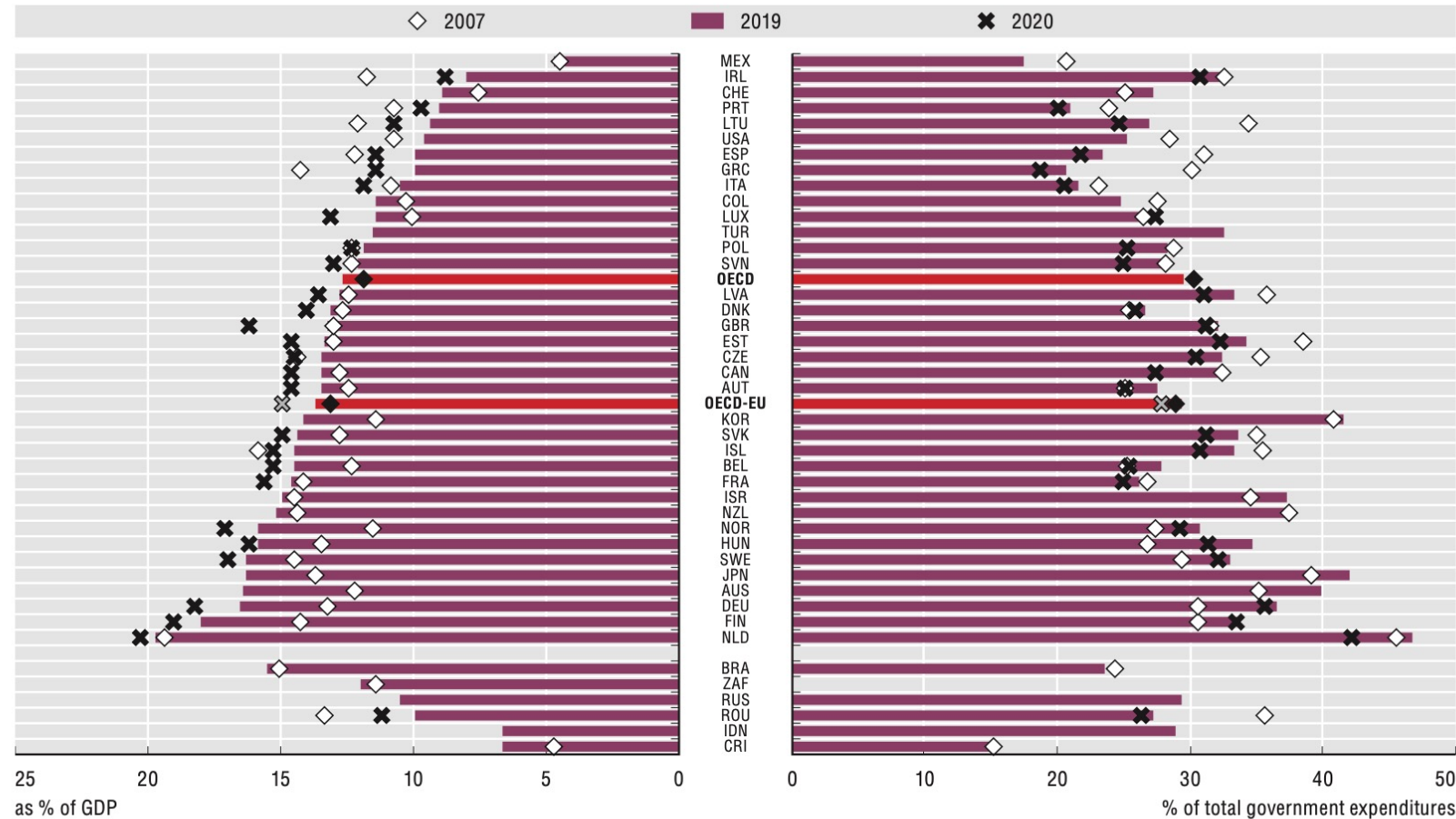
- Economic literature may have focus too much on the award stage of public contracts and not enough on the execution stage
- Contract renegotiations are the rule not the exception
- What consequences (more rigid contracts / more relational contracts) and what solutions for public procurement efficiency?

Public Procurement

- What are we talking about?
 - Public procurement is the process by which a government agency purchases goods, services and infrastructures (usually from the private sector) in order to provide public services.
 - **Different public entities:** State, City, Hospital, University ...
 - **Different suppliers:** Public, private and semi private companies ...
 - **Different contractual arrangements:** concession / PFIs / PPPs / traditional public procurement contracts ...

Public Procurement is big Business

8.1. General government procurement spending as a percentage of GDP and total government expenditures, 2007, 2019 and 2020



Source: OECD National Accounts Statistics (database). Data for Australia are based on a combination of Government Finance Statistics and National Accounts data provided by the Australian Bureau of Statistics.

Public procurement

Goods, services and infrastructures in order to
provide public services

Simple and complex products



Public contracts and asymmetric information

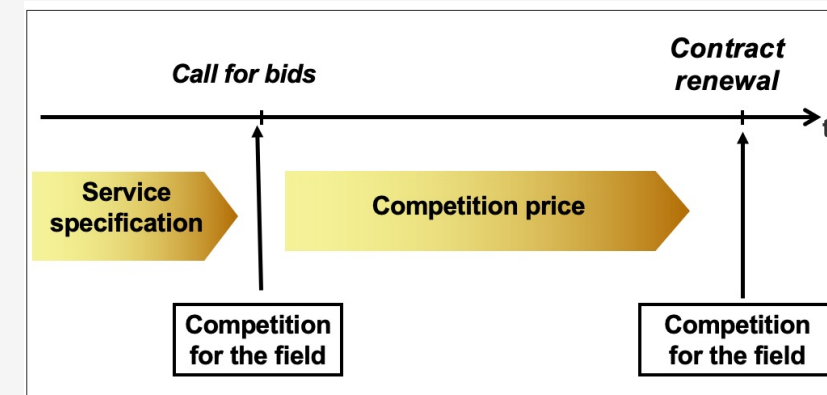
Asymmetric information is the main problem (Laffont-Tirole 1993)

The supplier knows better its production costs

Incentive contracts are the answer

- The public procurer should design a contract in order to infer the supplier's production costs
- Menu of projects / contracts, e.g., offering the supplier several potential projects to choose from, each with associated price
- Auctions / fixed price award mechanism

- ⇒ Might work for standardized goods.
- ⇒ Difficult to implement for custom made goods.



Public contracts and transaction costs

The procurement problem involves more challenges than just revealing a supplier's cost function (Williamson 1976; Hart & al 1997)

- Contract award is difficult
 - aggressive bidding, winner's curse, cartels, corruption during auctions
- Contracts are incomplete
- Renegotiations occur.
 - Both buyers and suppliers share uncertainty about many important design changes that occur after the contract is signed and production begins
- Ex-post adaptations are needed because of unanticipated conditions (e.g., Covid 19) or bad contract design
 - Contracting parties are not gentlemen / Fear of opportunism
- Transaction costs (e.g. mainly adaptation costs) are at the core of the analysis

Renegotiations are the rule, not the exception

Table 1: Contractual renegotiations – Some studies

Geographical Area	Sector	% of renegotiated contracts	References
France	Highways	50 %	Athias and Saussier [2007]
France	Car Parks	73 %	Beuve and Saussier [2021]
Latin and Caribbean America	All Sectors	68 %	Guasch [2004]
	Electricity	41 %	
	Transport	78 %	
	Water	92 %	
Portugal	Water	100 %	Cruz and Marques [2013]
	Road	100 %	
Spain	Highways	100 %	Baeza and Vassallo [2010]
United Kingdom	All Sectors	55 %	NAO [2003]
United States	Highways	40 %	Engel et al. [2011]

Renegotiations are the rule, not the exception

Number of renegotiations per country

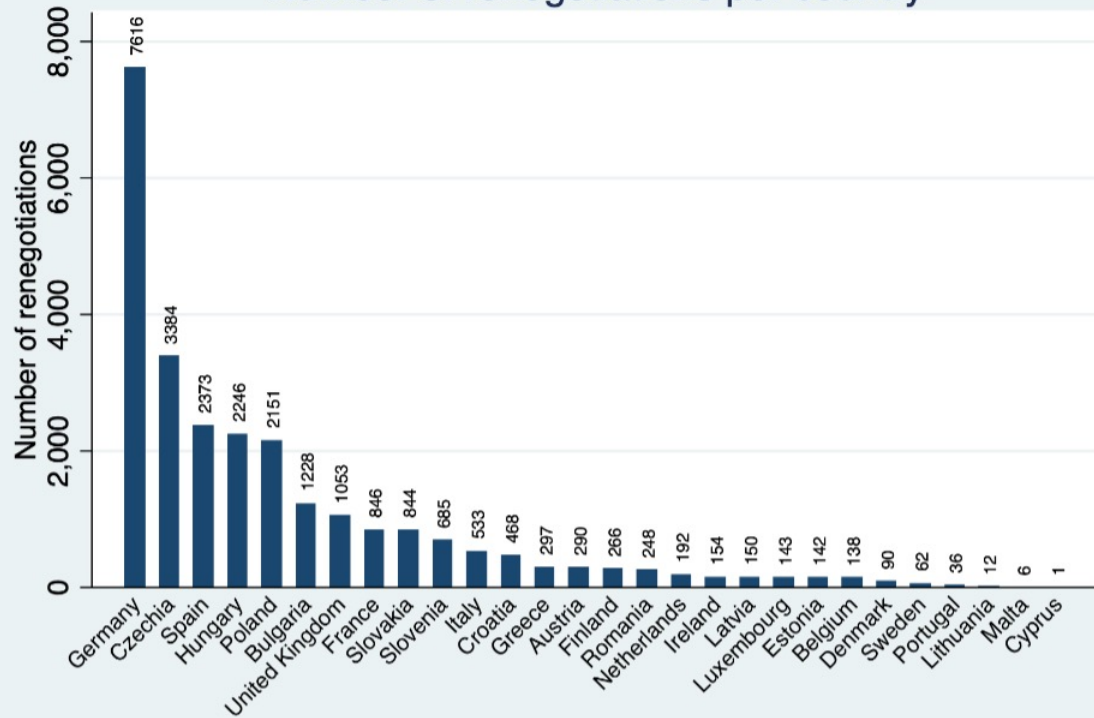
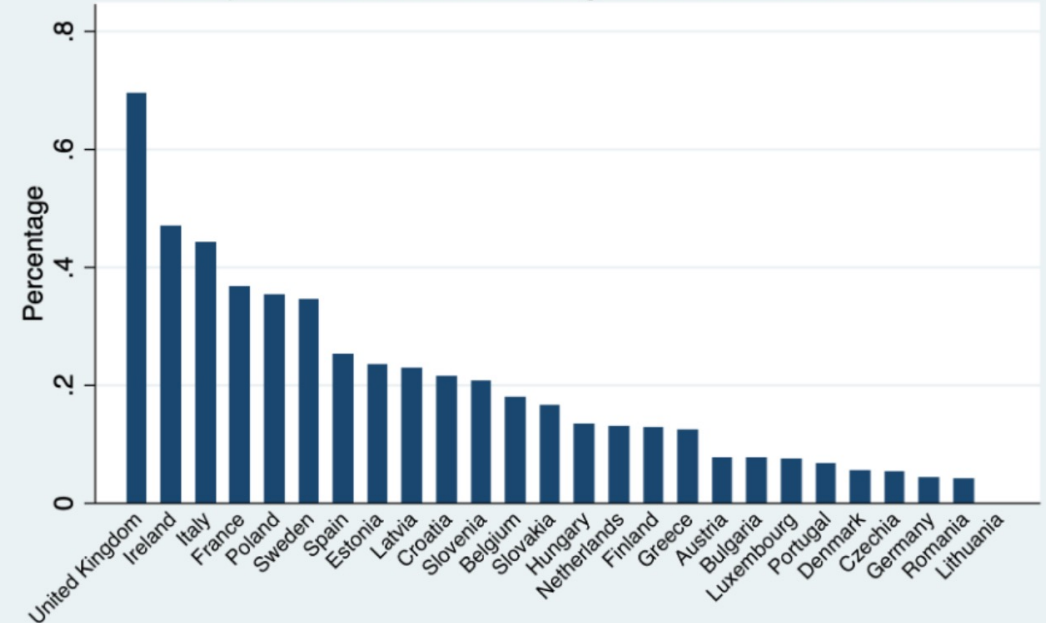


Figure 1

Renegotiated Contracts for COVID19 Reasons
Sample limited to contracts renegotiated after December 2019



Source: TED data set – May 2016-May 2021

Opportunism is a potential risk

One exemple (private side)

- 8 KPIs for Velib' in Paris (First contract 2007)
 - (KPI-1) «ability to take a bike in every station in less than 3 minutes ».
 - Controls made by the city showed that the private supplier met the objective by letting a broken bike in each station.

Adaptation costs (Bajari-Houghton-Tadelis 2012)

Adaptation costs. How high are they?

- BHT 2012 found that adaptation costs are high in highway construction contracts from Northern California (N=819 completed contracts)
 - Adaptation costs range from 16c to 2\$ for ex post every dollar of change
 - Adaptation costs represent between 8 to 15% of the winning bid.

Renegotiations might be your friend (Beuve-Saussier 2021)

- French car parks
- Scope of the database:
 - Focus on 252 expired contracts signed between 1965 and 2007 / 782 renegotiations / 166 renewals
 - 158 traditional contracts
 - 94 concession contracts
 - Contracts of 1 firm with 136 different municipalities

Renegotiations might be your friend (Beuve-Saussier 2021)

Renegotiations and contract renewals

- We found that there exist an optimal level of renegotiations in car park contracts in France
 - Contracts without any renegotiation are less likely to be renewed.
 - Contracts with (too) frequent renegotiations are less likely to be renewed
 - Contracts with renegotiations only on prices are less likely to be renewed

The problem

There is a tension between

- Providing incentives to lower costs (fixed-price contracts) and secure contracts against opportunism (rigid contracts)

And

- Avoiding costly and wasteful renegotiations that accompany adaptation (cost-plus contracts / flexible contracts)

Propositions:

Complex projects should result in less design completeness, are more likely to be renegotiated and are better procured with cost-plus incentives (i.e. negotiations).

Simple projects are more likely to have more complete specifications and are better procured using fixed-price contracts.

Observed in private contracts

Private sector relies more heavily on negotiated / cost-plus contracts, especially for custom made goods.

- Bajari & al 2009 : 46% of private sector non-residential building construction projects in Northern California were procured between 1995 and 2000 using negotiations. Only 18% using open auctions

While we observe that many public procurement contracts rely on open auction / fixed price ... not on negotiation

Why don't we see in public procurement practices more negotiated contracts? (Tadelis 2012)

Auctions promote competition, offer transparency, helps to mitigate corruption!

Can't we auction a complex project, based on a cost-plus contracts?
Bid over the plus portion of the compensation?

- (Adverse selection): highest cost and least able supplier will win a competitive auction for a cost-plus contract!
 - A supplier will not bid for less profits compared to its outside options
 - Outside options will be correlated to its reputation and its ability to complete projects in a cost-effective and timely manner.
 - Winners will be the less reputable and the less cost efficient suppliers!
- Cost-plus contracts are ill-suited for auctions! Negotiation should be the rule

Negotiation might be your friend

Negotiation for cost-plus contracts has other advantages (Saussier-Tirole 2015, 2020)

- The buyer and supplier spend time discussing the project and have opportunities to consider pitfalls before starting
- Without negotiation, a contractor who sees a flaw in the plans can use this information to submit a low bid betting for ex-post renegotiations to recover profitability
- A way to detect abnormally low tenders

Refined propositions

Propositions

Complex and incompletely specified projects should be procured using a cost-plus contract to be awarded using negotiation with a reputable supplier.

For moderately complex projects, fixed price contracts with competitive auction will be preferred as long as there are a large number of potential suppliers.

=> Need to find a way to use information about the past performance of potential suppliers as a selection criteria ... while at the same time, have a transparent way through which past performances is evaluated (avoid favoritism) (See Coviello-Spagnolo 2018)

Toward relational contracts: Hart & al. 2019 proposition

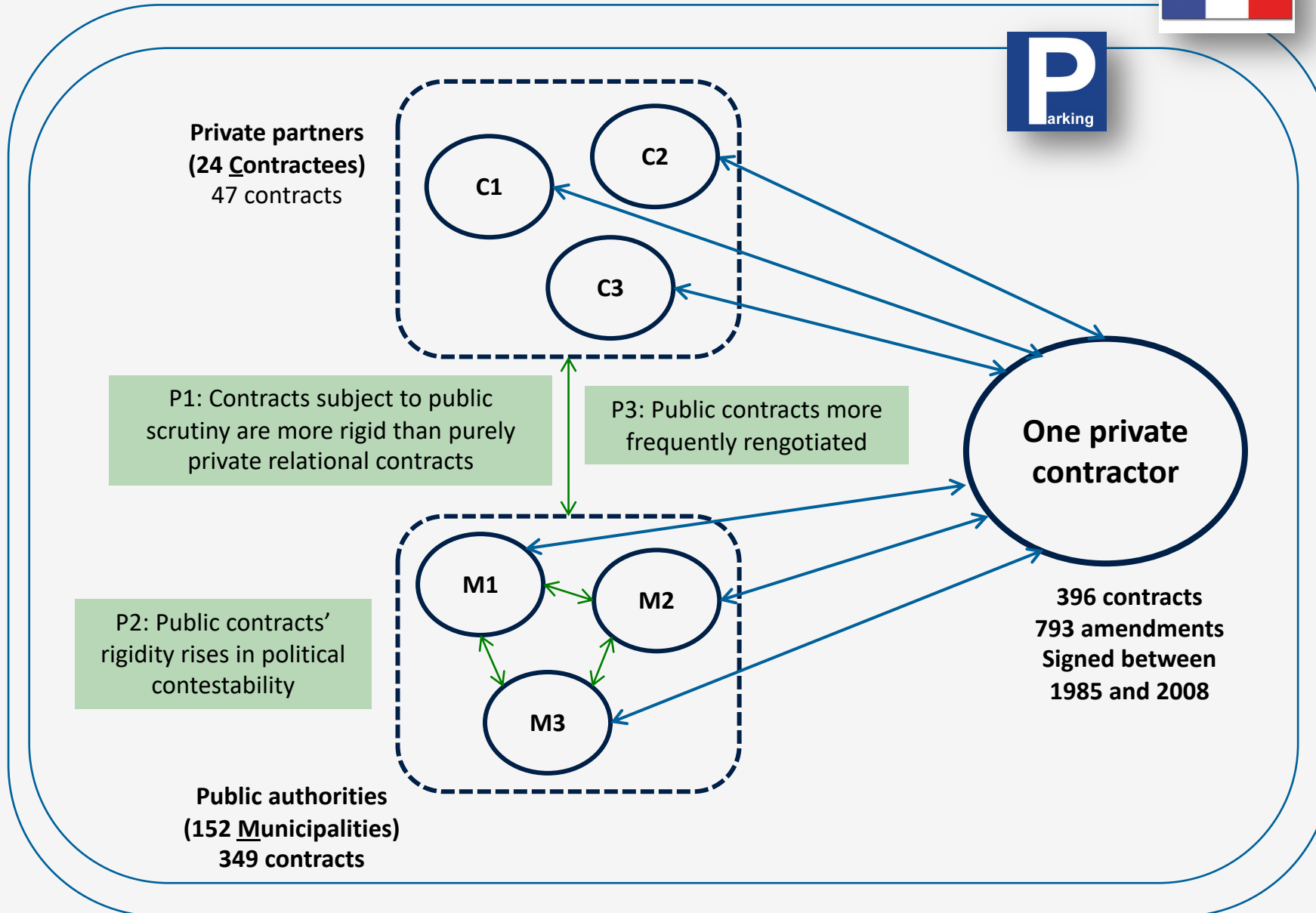
- Renegotiations, that inevitably occur in incomplete contracts decrease cooperation (shading) between contracting parties (Fehr, Hart, et Zehnder 2011).
- Through the formal part of the contract, parties adopt guiding principles that oblige them to treat the other party's interest as having a comparable importance to their own and which spell out how the parties will work through issues as they arise
- Those principles are enforceable and help the enforcement of the relational part of the contract

Beuve & al. 2019's skepticism

- Another stream of the literature focus on Third Party Opportunism (Spiller 2008)
- Public contracts are intrinsically different from private ones in that
“A substantial amount of supervision and control is done by third parties (such as political contesters and interest groups) not necessarily interested in the success of the contractual relationship”
- Beuve & al 2019 found out, comparing public vs. private contracts in car park industry that
 - Public contracts are more rigid than private ones
 - Public contracts where political contestability is high are even more rigid

→ Are relational contracting an option for public contracts? One of the question on the top of the agenda. At what conditions?

Summary: Data & Propositions:



Conclusion: on top of the agenda

“An important issue is whether it is possible to construct a mechanism that minimizes the ex post cost of making changes and the potential for **corruption**” (Tadelis 2012)

- Corruption is an issue ! See the beautiful paper of Brogaard-Denes-Duchin 2021

Directives 2014/23/UE; 2014/24/UE; 2014/25/UE

Acknowledge that public procurers' discretion is needed:

- At the selection stage
- At the execution stage

... In exchange for **more transparency**, especially concerning renegotiations

TED Project ...

Number of renegotiations per country

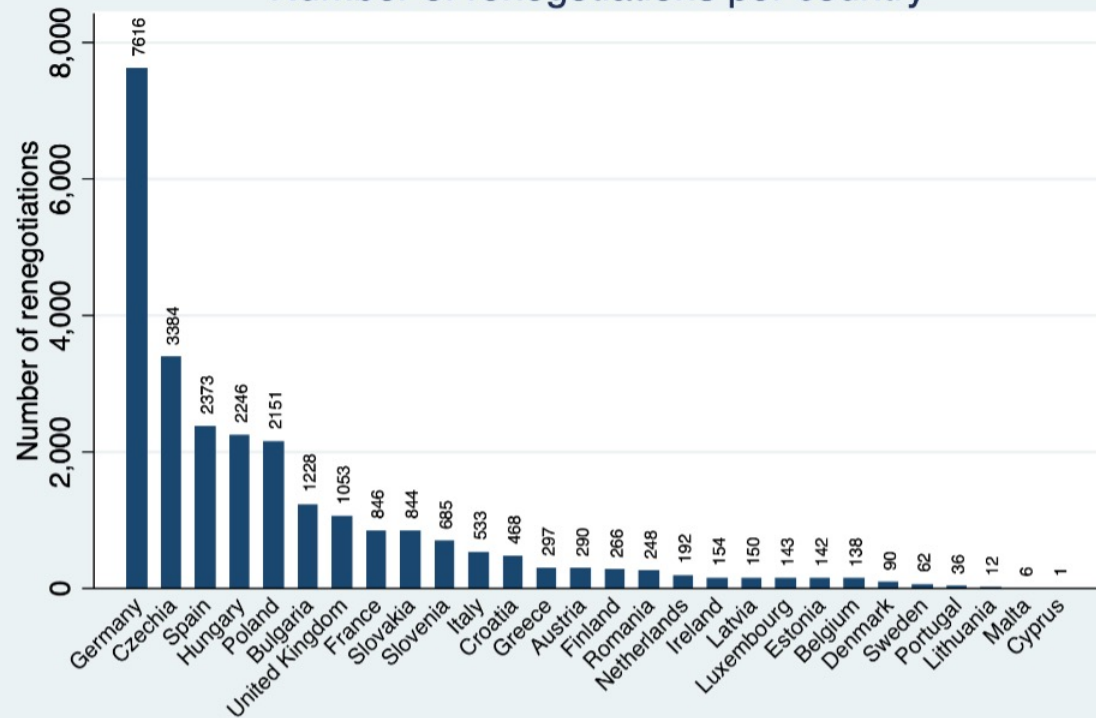
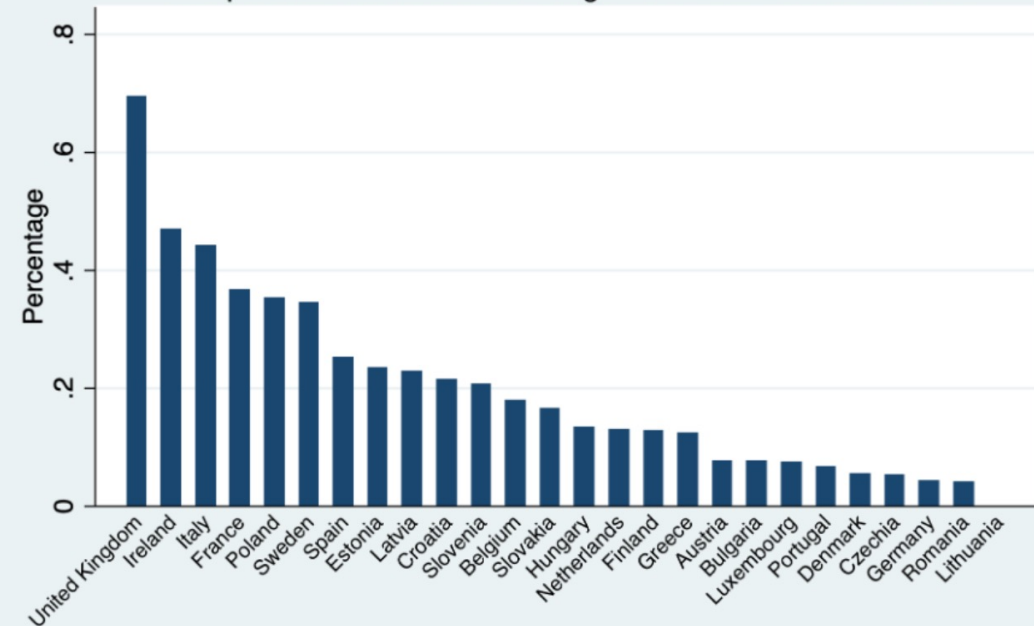


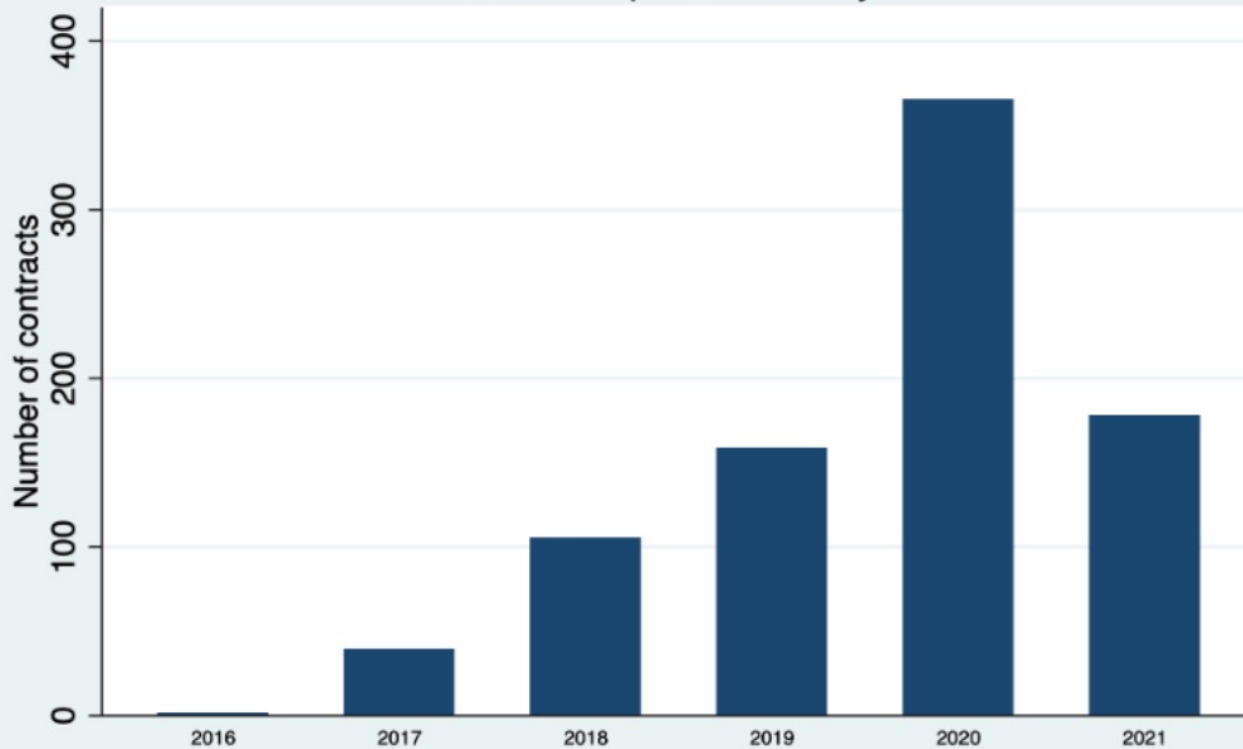
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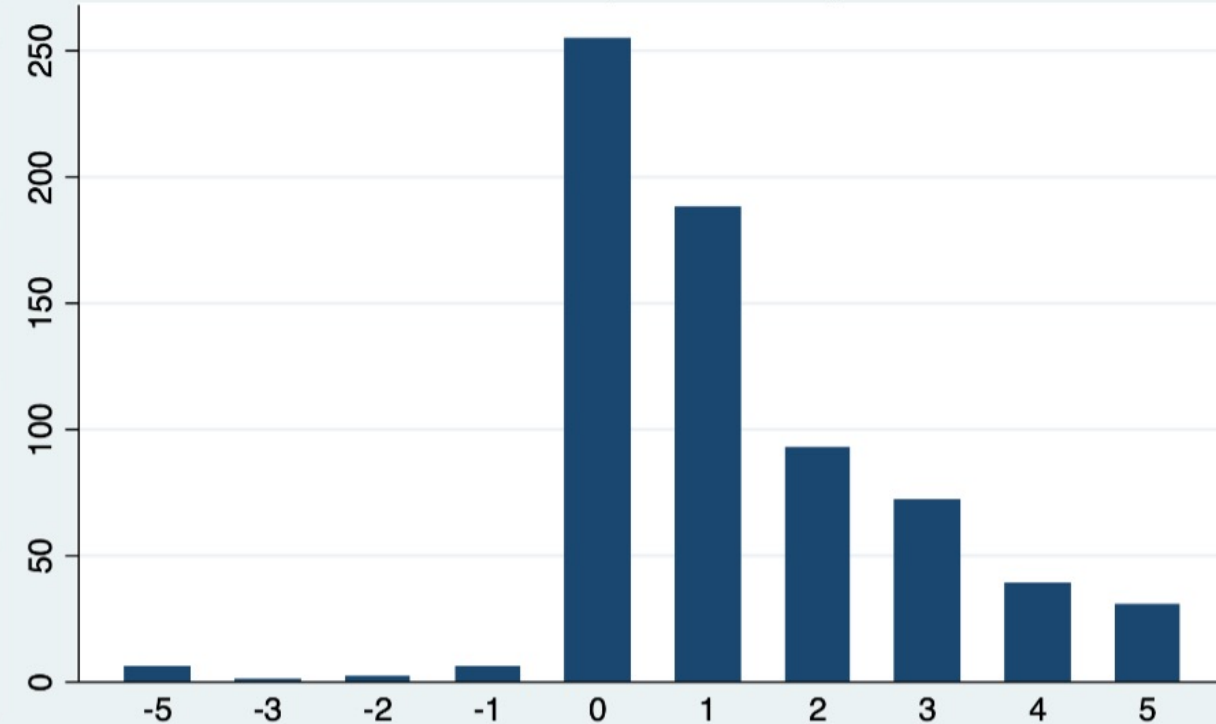
The French Case

Number of contracts renegotiated per year
FR Whole sample 2016 - May 2021



Source: Calcul of the authors.

Size of the renegotiations
FR Whole sample 2016 - May 2021



Source: Calcul of the authors. 0 = {-10%; 10%}; 1 = {10%-20%}; 2 = {20%-30%}; 3 = {30%-40%}; 4 = {40%-50%}; 5 = {50% and more}; -1 = {-10; -20%}; -2 = {-20; -30%}; -3 = {-30; -40%}; -4 = {-40; -50%}; -5 = {-50% and more}

Some final comments: multiplication of public procurement objectives

- Adding secondary public policy objectives to public procurement is increasing the complexity
 - Social / environmental / innovation objectives are difficult to define and to control ex post
 - Public procurers capabilities are limited (Decarolis & al 2018)
- Some exciting outcome-based innovative contracts
 - Social Impact Bonds (Indigo data base 2021 - GoLab Oxford)
 - Social outcome-based contracts

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