

# **Governance challenges in infrastructure and urban investments**

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# The facts

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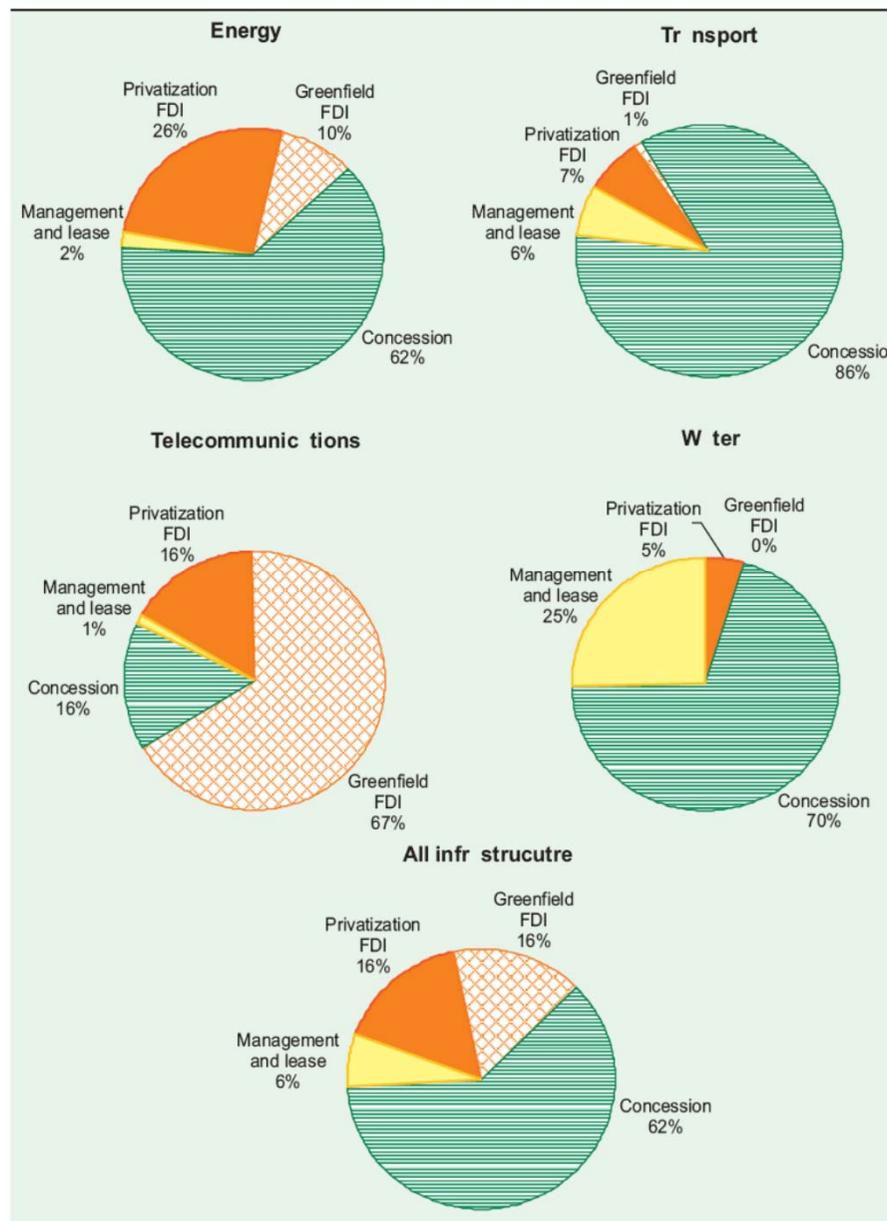
- ▶ PPP contracts are pervasive in infrastructure sectors.

| Low                        | Extent of private sector participation |                                       |                                    | High               |
|----------------------------|--|---------------------------------------|------------------------------------|--------------------|
| Work and service contracts | Management and maintenance contracts   | Operation and maintenance concessions | Build operate transfer concessions | Full privatization |
|                            | <i>Public private partnerships</i>     |                                       |                                    |                    |

- ▶ Def: global contracts, bundling investments and service provision, with delayed payments, usually financed through user fees and/or subsidies.
  - ▶ They are often hailed as a solution to chronic under-investment, although the evidence is mixed on that.
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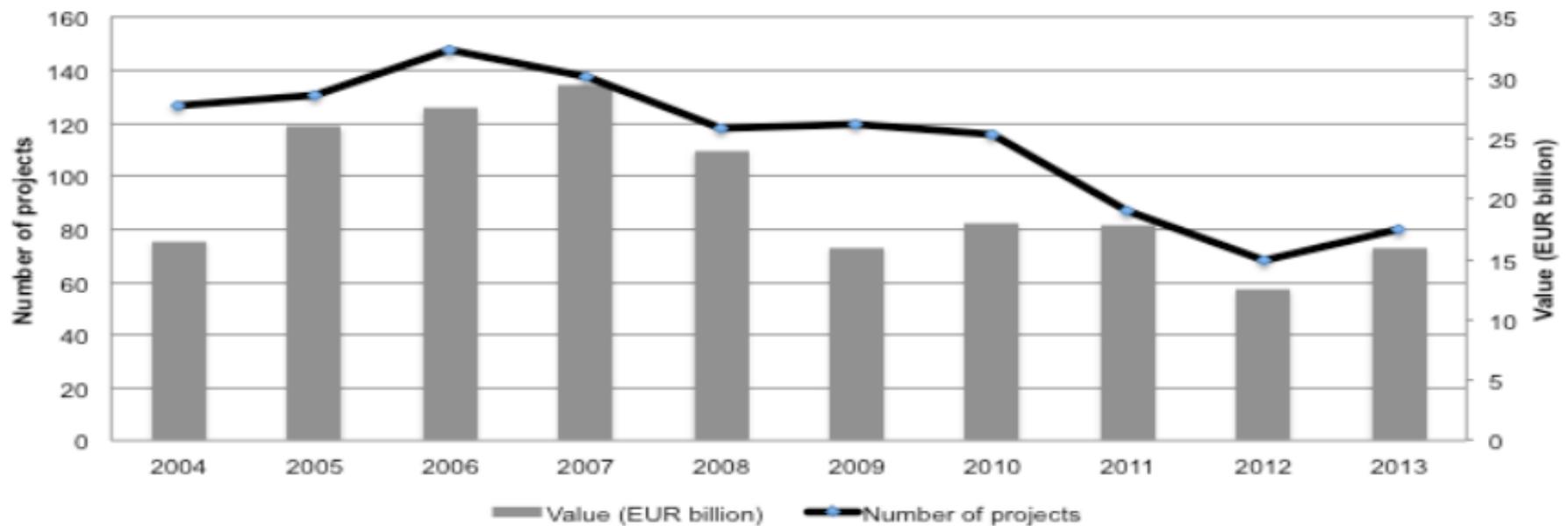


**Figure III.6. Main legal forms of foreign investment commitments in the infrastructure industries of developing and transition economies, by industry, 1996–2006**  
(Based on the number of projects; in per cent)



Source: UNCTAD secretariat calculations based on data from the World Bank's PPI Database.

**Figure 1. European PPP Market 2004-2013 by Value and Number of Projects**



*Source: EPEC Market Update 2013*



# The Challenges of infrastructure investments

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- ▶ The Challenges of infrastructure investments.
- ▶ How do PPPs fare in that respect? Limitations. Examples.
- ▶ Renegotiation facts.
- ▶ The economics of renegotiation.
- ▶ The way forward: the reform agenda.
- ▶ Note:
  - ▶ Will mostly focus on bad apples in the basket.
  - ▶ Does not mean that all apples are bad, but:
  - ▶ Could lead to a smaller basket than optimal (and some very costly failures)
  - ▶ Could have strong symbolic impact and political economy consequences (think of Cochabamba for water in LAC).



# The Challenges of infrastructure investments

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- ▶ Determine what and when to build
- ▶ Do it in a cost effective way
- ▶ Ensure proper maintenance and service quality during the life of the project.
  
- ▶ Unfortunately, these 3 challenges are often failed by infrastructure works, leading to white elephants, cost overshooting, insufficient maintenance and poor services.
- ▶ Main reasons include:
  - ▶ A lack of market test, as often these infrastructure works are not financed by user fees.
  - ▶ Regulatory failures, due to capture, lack of experience, bad design of regulatory agencies, conflict of interest, corruption.



## How do PPPs fare in that respect?

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- ▶ There was a belief that PPPs, because they involve the private sector, would help remedy these problems.
- ▶ However, this is far from obvious, as the problems mentioned above also hold for PPPs (especially the type of PPPs that cities may want to build, such as schools, stadium, hospitals, concert halls, etc.).
- ▶ A few recent examples.



# Nice Allianz Riviera



# Nice Allianz Riviera

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- ▶ 35.000 seats, inauguration in 2013, National sport museum, and 29,000 m<sup>2</sup> of commercial area.
- ▶ Built by Nice Eco Stadium, led by Vinci Concessions.
- ▶ Final cost estimated at €400 million: €243 million of which 69 of public subventions, and €8 m for 27 years.
- ▶ Severely criticized by French Cours des Comptes, for not adjusting to PPP legal requirements, and for unjustified changes in attribution price between initial and final offer.
- ▶ Judicial procedure currently underway.
- ▶ Similar stories in Bordeaux, Marseille (already renegotiated €8 m/y rent), or Valenciennes. Side events overestimated, and club may fall in L2 or worse (in Le Mans, liquidated, 2,1 m/y)....



# French Pentagon



# French pentagon

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- ▶ Consortium led by Bouygues, and including other large firms such as Thales.
- ▶ Cost: €154 million during 30 years.
- ▶ Questions: how will further adaptations be handled?
  - ▶ Installation of a printer and a scanner has been quoted ... at 13 614 euros, and 2274 euros for electrical outlets.
- ▶ What about renegotiations?
  - ▶ “Networks and communication systems will evolve over the years. There will be contract amendments. There will also inevitably be renegotiations regarding maintenance markets. And as the provider is in a sort of monopoly situation, the ministry will end up in a weak position to discuss.”
- ▶ Was it worth the cost?



# How do PPPs fare in that respect?

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- ▶ Main problems involve:
- ▶ How projects are chosen and handled over their life cycle:
  - ▶ PPPs not always evaluated independently ex ante.
  - ▶ Opaqueness / discretion in handling different stages (attractive to politicians and large firms).
  - ▶ Lack of maintenance because of bias towards new projects.



# How do PPPs fare in that respect?

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- ▶ **The institutional environment:**
  - ▶ Mismatch between urban infrastructure needs and local authorities taxing and spending capacity. Political economy.
  - ▶ Often a single PPP agency in charge of all stages of the project (planning, tendering, construction, maintenance, supervision, contract enforcement, conflict resolution), which generates conflicts of interest.
  - ▶ Agencies organized by product and not by function.
- ▶ **The contracts:**
  - ▶ They are not always financed by user fees.
  - ▶ Pervasive revenue guarantees.
  - ▶ High frequency of **renegotiation**.



# Renegotiation facts

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- ▶ PPP contracts often renegotiated very early in life cycle of projects.
  - ▶ Guasch, Laffont, Straub (Latin America, 1989-2000): 55% in transport and 74% in water.
  - ▶ Moore, Straub, Dethier (2014): extend transport data to 2011. 124 PPPs in Brazil, Chile, Colombia and Peru. 399 renegotiations.
  - ▶ Engel, Fischer, Galetovic (Chile): 50 PPPs (roads, airport, prisons, water reservoirs, etc.), from 1993 to 2007: 147 renegotiations.
  - ▶ Mexico: end of the 1980s, taxpayers covered US\$ 8 bn for renegotiated highways.
  - ▶ Athias & Saussier: Highways, 1970-2005, 50% renegotiations.
  - ▶ Beuve et al. (France): car parks, France, 1965 to 2008, 73%.

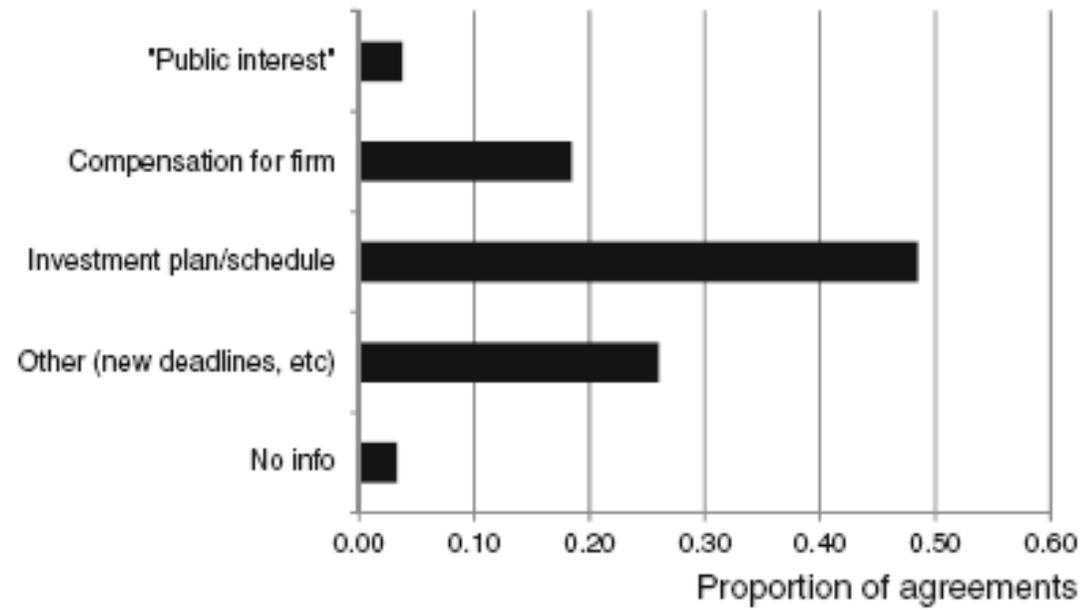


# Renegotiation facts

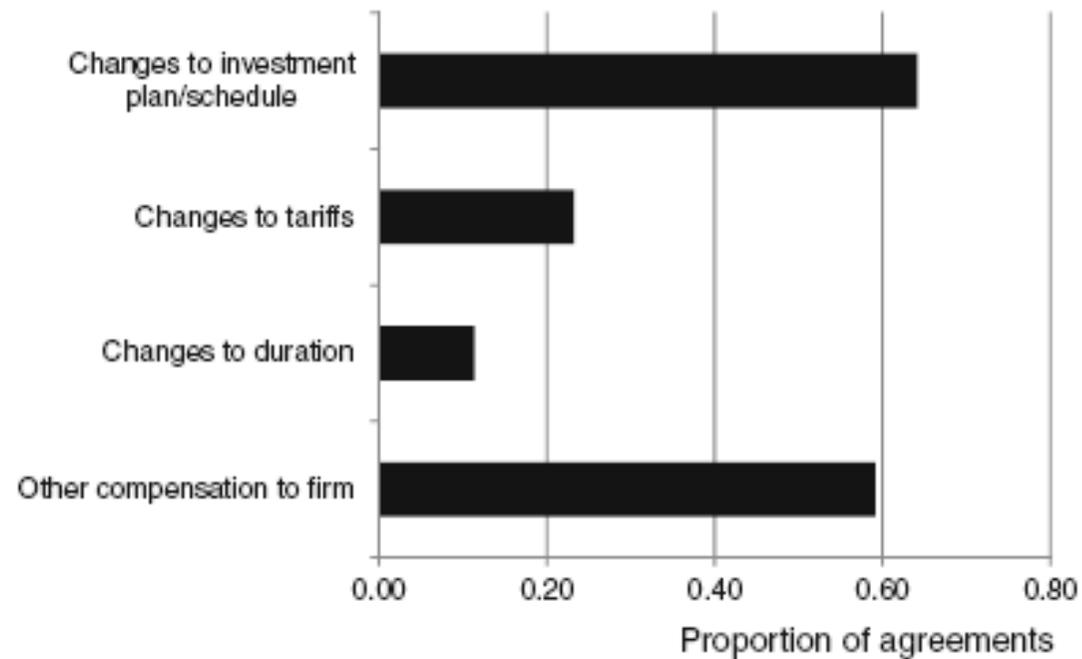
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- ▶ **What is renegotiated?**
  - ▶ Mostly tariffs, investments, or duration.
- ▶ **When? Often very early.**
  - ▶ Guasch, et al.: transport (3.1 years), water (1.6 years).
  - ▶ Engel et al.: 78% of renegotiations during construction.
- ▶ **Who renegotiates?**
  - ▶ Firms that struggle to make profit / opportunistic governments.
  - ▶ Sometimes by agreement.
- ▶ **Who benefits?**
  - ▶ Typically, firms agree to increase investments in exchange for direct payment from regulator, increase in tariffs or extension of the contract (38 % of all renegotiation cases in the sample).
  - ▶ What about the public?





**Fig. 2** Reasons for renegotiation



**Fig. 3** Outcomes of renegotiation

# The economics of renegotiations

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- ▶ What does economic theory say on this phenomenon?
  - ▶ Guasch, Laffont & Straub.
  - ▶ Bajari & Tadelis.
  - ▶ Engel, Fischer & Galetovic.
  - ▶ Spiller.
- ▶ How do these different theories fare when confronted to the data?



# The economics of renegotiations

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- ▶ The difference in approach stems from the importance given to the different “ingredients”: information available to agents, incompleteness of contracts, commitments problems, projects complexity, political opportunism, incentives, institutional differences between public and private spheres, etc.



# Guasch, Laffont & Straub

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- ▶ Model: “principal-agent” with adverse selection. The PPP contract is characterized by a fundamental information asymmetry (firm knows its costs better) and a commitment problem if the concessionaire, when losing money ex post, wishes to renegotiate.
- ▶ These renegotiations are more likely when:
  - ▶ Institutional quality is low, cost of public funds is high.
  - ▶ Economic shocks are important.
  - ▶ The regulator is not present, inexperienced, or captured.
  - ▶ Regulation is “price cap”.



# Guasch, Laffont & Straub

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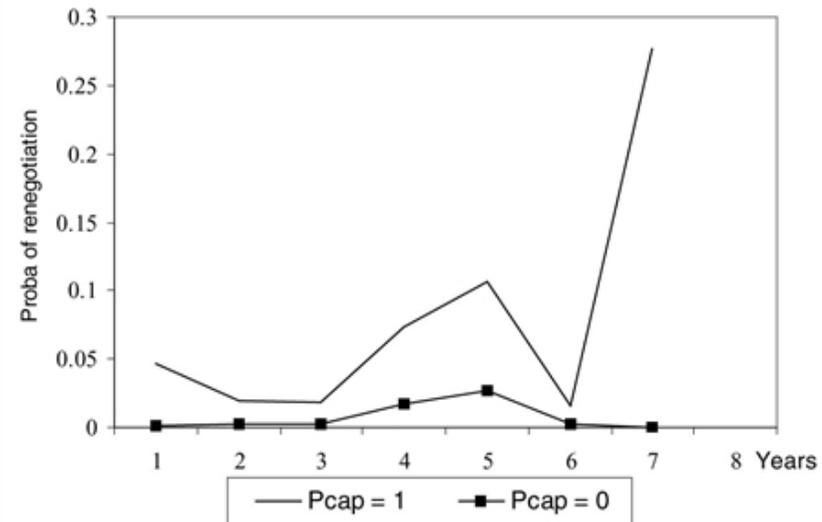
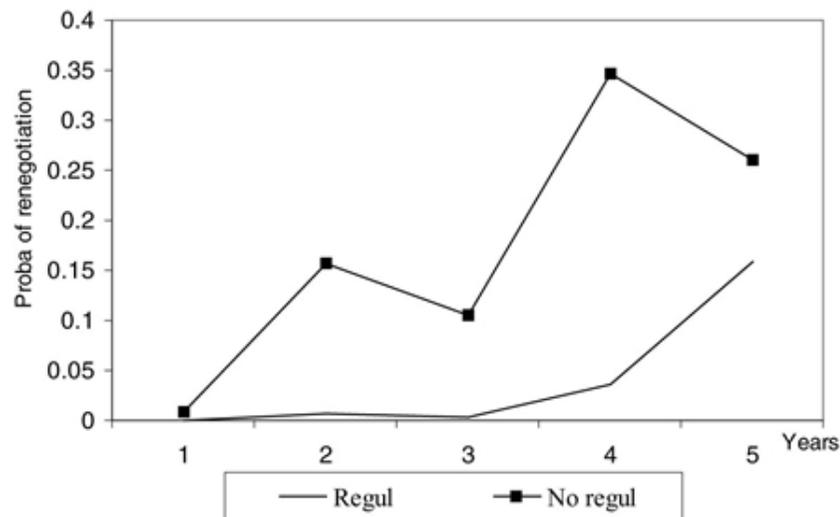
- ▶ Moreover, a second type of renegotiations may happen: those triggered by the government.
- ▶ May be opportunistic (electoral or fiscal considerations).
- ▶ Main difference with concessionaires-led renegotiations:
  - ▶ Investment variables et financing sources.
  - ▶ Corruption: increases concessionaires-led renegotiations, but decreases those initiated by the government. Appears that corruption allows some governments to make ex ante arrangements, avoiding the need to renegotiate.



# Data

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- ▶ 307 concessions (water and transport) in 5 countries (Argentina, Brazil, Chile, Colombia and Mexico) between 1989 and 2000.



## Engel, Fischer & Galetovic

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- ▶ Renegotiations are mostly an instrument for politicians seeking to ease the fiscal constraint, especially before elections.
- ▶ Leads to strategically low bidding by firms (and a selection bias in set of winners).
- ▶ Renegotiations happen often during construction.
- ▶ They can be handled by an independent panel or bilaterally.
- ▶ Cost often shifted to future administrations.



# Data

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- ▶ **Number and value of renegotiations:**
  - ▶ Number: bilateral (52%) vs. panel (48%).
  - ▶ Value: bilateral (83%) vs. panel (17%).
- ▶ **Timing of renegotiations:**
  - ▶ During construction: bilateral (78%) vs. panel (46%).
- ▶ **Timing des compensations:**
  - ▶ Current administration: bilateral (35%) vs. Panel (61%).



# Bajari & Tadelis

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- ▶ Focus on tension between the ex ante provision of incentives and the ex post cost of renegotiations:
  - ▶ Simple projects very “complete”, regulated by high-powered incentives (fixed prices).
  - ▶ More complex projects (which renegotiation cost would be higher ex post) more “incomplete”, regulated by low-powered mechanisms (“cost plus”).
- ▶ Conclusions consistent with observations from the US construction industry among other.



# Spiller

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- ▶ Private contracts generally of relational type (in case of unforeseen circumstances, partners adjust their behavior without need to renegotiate), while public contracts are more formal and rigid (for ex., concession contracts include main regulatory terms: prices, quality, renewal, penalties) because the public sector is subject to a “responsibility” risk.
- ▶ Moreover, concession contracts must reduce opportunism of public partners, in industries where this risk is high (water). They are therefore more rigid.
- ▶ These two aspects lead to more rigidity and to the need to renegotiate when shocks happen.



# Renegotiations

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- ▶ Bottomline: to what extent are they a symptom of governance failure?
- ▶ Some incidence is expected and may be unavoidable due to “fundamentals”: nature of public contracts, irreducible complexity, long term contracts.
- ▶ Some incidence related to absence of market test and to regulatory failures, and could be reduced with suitable reforms.
- ▶ A (probably) important part of observed renegotiations is still the symptom of limitations of the institutional and contractual environment, and is likely to be welfare reducing.



# Conclusion on governance

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## ▶ Reforms:

- ▶ Make sure financing is not push off-balance, included in debt.
- ▶ Think of innovative financing public-dev banks-private structures, but beware of incentives of each party.
- ▶ Evaluation ex ante by independent party. Do this in the context of the overall investment portfolio.
- ▶ Define PPP agency role better. Limit it to initial stages (planning, design, delivery). Coordinate agencies likely to initiate PPPs.
- ▶ Make PPP agency separate from agency(ies) in charge of regulation, monitoring contract compliance, and enforcement.



# Conclusion on governance

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## ▶ Reforms:

- ▶ Adjust power of incentives to environment: regulator ability and independence, long-term commitment ability of authorities, etc.
- ▶ Adapt award procedure to nature of project and characteristics of environment.
- ▶ Make contracts and follow-up data public.
- ▶ Conflicts and renegotiation should be transparent and led by independent expert panel.



# Conclusion on governance

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- ▶ Some of the problems mentioned can be fixed by implementing all or part of these reforms and making sure the specific institutional environment is set right.
- ▶ Other are inherent to the nature of PPPs and the public-private relationship.
- ▶ Expectations should adjust to
  - ▶ How much reforms are feasible and how fast.
  - ▶ What can be expected, even in the best environment.



**Thank you!**

