Transportation Infrastructure: The Next Generation of Public-Private Partnerships

Deeper Partnerships that Align Incentives and Reduce Risk

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Huge Transportation Investments Needed

- The American Society of Civil Engineers reports that America needs $265 billion to replace and upgrade existing transportation infrastructure
- Cities and regions must build new infrastructure to attract business, support population growth, and offer address future transportation needs.
- Even without the recession, and if voters were in a mood to support large public capital outlays, we could still benefit from private investment to meet infrastructure needs

Public-Private Partnerships for Infrastructure Development

- Public-private partnerships (P3s) are becoming more common throughout the world
- The relevant P3 model is Design-Build-Finance-Operate (**DBFO**)
- A private partner **designs, builds, and finances** an infrastructure project
- The public partner grants concession rights to **operate and collect tolls** to pay for costs and a reasonable rate of profit

The US P3 Experience So Far (Toll Roads)

More than a dozen significant P3s, but **a very high failure rate**:

- **Bankrupted:**
  - Camino Columbia Toll Road (Texas)
  - SR-91 Express Lanes (Los Angeles)
  - South Bay Expressway (San Diego)
  - Pocahontas Parkway (Washington D.C.)
  - Several more are in trouble

- **Results:**
  - **Opportunistic politics**
  - **Public buyouts of concessions worth hundreds of millions to taxpayers**

P3 Pioneers

- France and Spain started doing highway P3s in the early 1960s
- A high rate of P3 failure
  - Buyouts were common
  - A tremendous amount of public subsidy to private financiers
  - Politics dictated a series of flip-flops from P3 finance, to public finance, and back to P3
- **The 50-year experience of France and Spain is similar to what is happening in the US today. Same mechanisms, same results.**

Fundamental Problems

- **Poor planning**
  - Ill-defined frameworks for risk allocation.
- **No ability to deal with traffic risk and economic recessions**
  - Recessions will happen over the course of 30-50 years. We don't make provisions for them.
- **Bad systems for public subsidy**
  - Concessions in failure don't have buyers other than the public sector.
  - Why is there no middle ground between outright purchase of the concession and keeping the private partner in operation with smart subsidy?

Bad Tools in the Traditional P3 Model

- **Uncompetitive Bidding Process**
  - Ineffective checks on important deal terms
- **Traffic estimation is highly inaccurate**
  - Traffic drops during recessions and private partners can't collect enough tolls to pay their debt.
  - When traffic is overestimated, private partners can't pay their debt.
  - When traffic is underestimated, private partners make more than a reasonable profit.
- **Fixed-term operating contract**
  - The private partner can't pay all their debt if their operating contract is too short and traffic is lower than expected
  - Contracts that are too long don't keep up with demographic and technological change. They block progress.
- **Arcane finance**
  - Higher-risk debt, too much debt, messy ownership transfers, defaults, bankruptcies

Better Tools Needed

- **In the late 1990s, France and Spain overhauled their broken P3 systems.**
- Chile was just starting P3s, but took cues from France and Spain.

- **Major areas of reform:**
  - **Procurement** – new legal frameworks to allocate risk, introduce competition
  - **Public financing tools** – income guarantees and debt financing to keep private partners in place
  - **Flexible contracts** to deal with traffic drops from recessions

- Selected highlights in the slides to follow

Procurement Reforms - France

France – thorough system of checks on quality and contract health

- **Highly structured bids**: RFP, pre-qualification, ???bidding, detailed face-to-face negotiations
- **Scheduled renegotiations every 5 years** for contract maintenance
- **Extensive detail on contract parameters**, incl. social and environmental clauses, similar to utility regulation.

Procurement Reforms - Spain

- **Risk management** based on four legal principles:

1. ***The private sector*** *takes on most* ***market risks***
2. ***The public sector*** *takes on most* ***non-market risks***
3. ***Risks mitigated by the public sector should not negatively impact the public sector budget.*** Subsidies can be considered, but most mitigation involves changes to toll levels and concession length.
4. ***Risk is understood to be symmetrical*** *and either favoring the public or private partner.* If a risk is not held by one partner, it is held by the other.

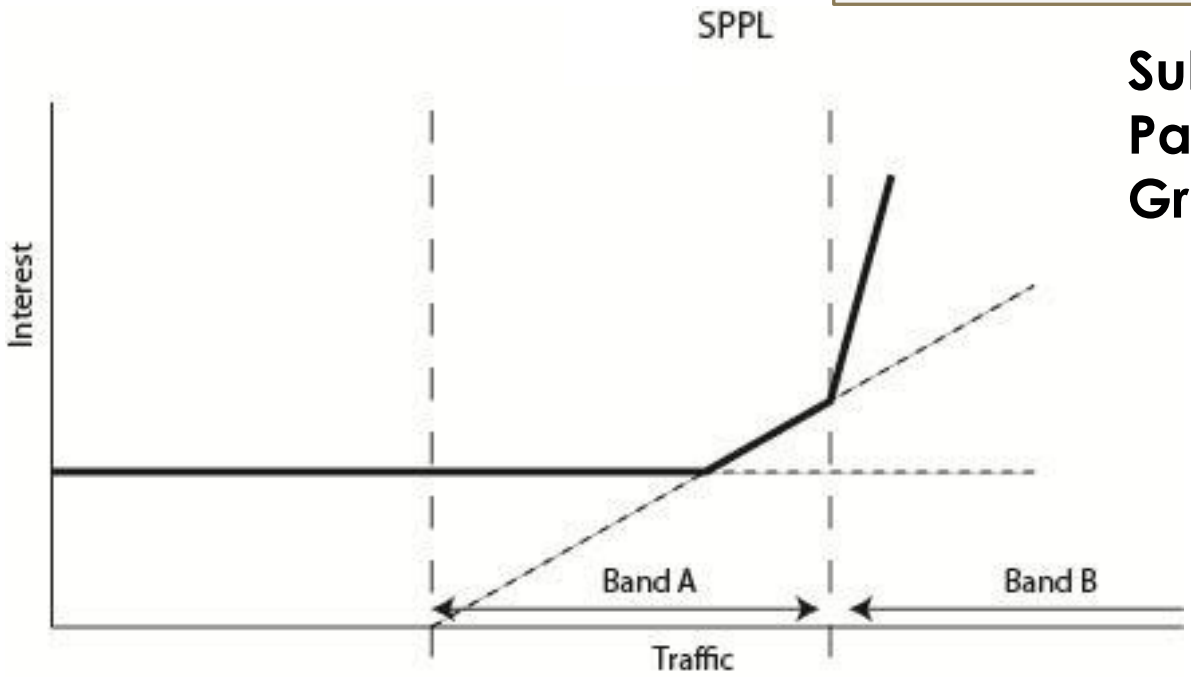
No risks are legally treated as outside the scope of the contract.

Financing Reforms - Spain

- **Subordinated Public Participation Loans**
- Loans act like **junior debt**
  - **Lower interest rate**, repaid only after private senior debt (favors private partner)
  - **Interest rate varies with project performance** (favors public)
  - Limited to >50% of total debt (favors public)

- **Purpose:**
  - Make projects viable that can't be fully supported by the market
  - **Give private partners a buffer** against low performance by lowering their debt service

Subordinated Public Participation Loan Graphic



- The solid black line shows interest paid. Where the line is parallel to the x-axis, interest owed is based on loan principal; where it is not, interest owed is based on traffic. Base rate is 1.75%
- Finely dotted represent the dollar amounts paid associated with each way of calculating interest. Band A adds 15% of traffic revenues; Band B 35%.
- The solid line is kinked where one way of calculating interest overtakes the other in value.

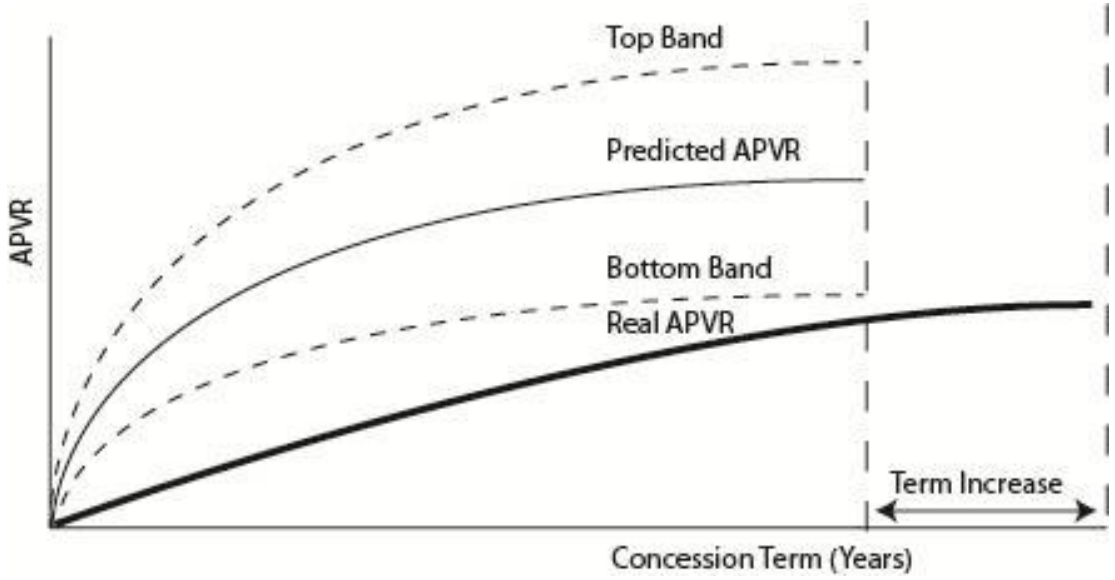
Contracting Reforms – Spain & Chile

We can think of concession contracts as two variables: contract length and amount of revenue.

- The traditional model fixes the contract length and lets revenue vary.
- Spain & Chile let the contract length vary, while the revenues are fixed to an original bid.
  - Contracts end on a trigger instead of a –pre-defined end
  - **Variable length helps the private side cover debt service when traffic is very low and prevents outsized private gain when traffic is very high**

Spain – Accumulated Present Value of Revenue Contracts

Low Traffic Case

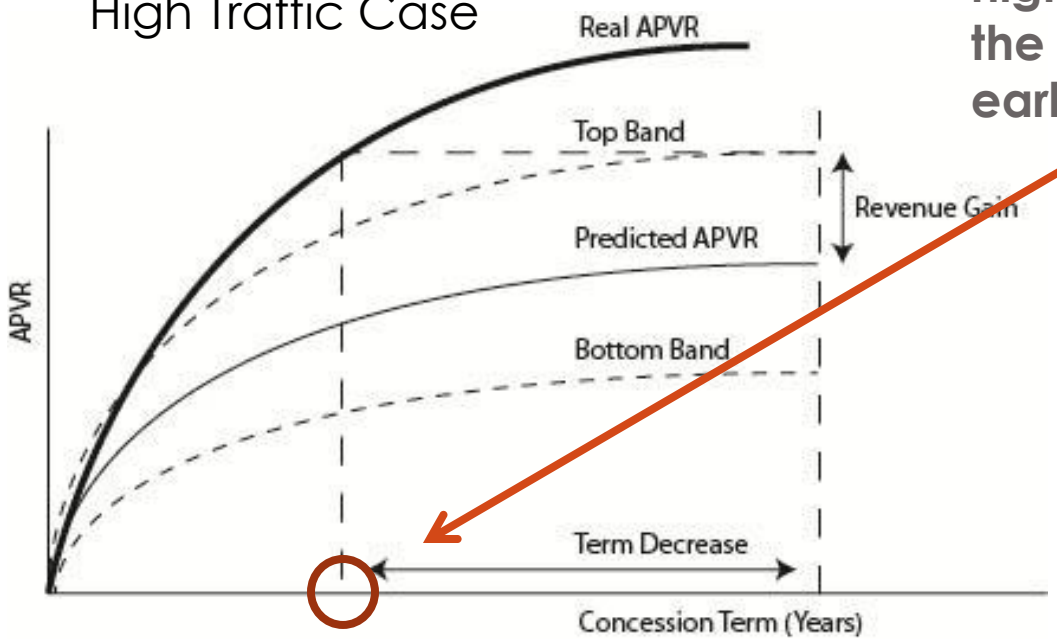


If revenues are much lower than expected, the operating term is extended

- The contract does not end until accumulated revenues are equal to the Bottom Band.
- The private partner retains some downside risk, but not what it would if term ended as predicted.
- The Top and Bottom Bands are risk-based guidelines for setting toll rates

APVR

High Traffic Case



When traffic is much higher than expected, the operating term ends early

- The contract ends when real accumulated present value revenues equal the top band (same height on APVR axis).
- Private partner retains some upside, but not what it would if term did not end early.

Chile - Revenue Distribution Mechanism

- **Converted fixed-term contracts to variable to let private partners survive a severe recession** (1998-2002) that sunk traffic and threatened private partners' finances.
- Guaranteed contract until revenues achieved are 3.5%-4.5% above predicted traffic.
- Requires private capital investments equal to the guarantee minus the predicted traffic.
- Effectively eliminates private risk in exchange for capital improvements

What the Old Generation Gets Wrong

1. A concession that cannot be flexible with respect to traffic risk will be more prone to failure
2. A concession that is financially overleveraged will be more likely to fail when traffic falls
3. Infrastructure asset markets are not competitive enough to provide ready buyers for failed/failing concessions, so the public partner is the only potential workout option

- The result: public partners are highly exposed to opportunistic contract renegotiations or buyouts. They now have to pay for the infrastructure they could not.

What the New Generation Gets Right:

1. Well planned projects with realistic parameters due to competitive bidding
2. Smart tools for public subsidy
3. Projects can withstand dips in traffic

- The result:
  - Risks are reduced between the partners instead of just allocated
  - Less renegotiation and opportunism
  - A "deeper" form of P3