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- Trend before financial crisis: delegation to private sector of infrastructure and public service provision.

- Private sector financed 20% infrastructure investment in LDC in the '90s (Hammami, et al. 2006, IMF).

PFI since1992 (HMT 2008):

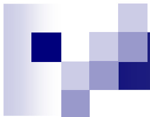
- 625 signed projects for £58.7b.
- 510 completed facilities
- 70 hospitals completed, 27 under construction
- 94 projects for 800 schools
- 43 transport projects
- 300 projects in defence, leisure, museums, accommodation, waste management

…'CTD

- **UK**: leading the way in Europe
- **Portugal**: PPP 20 % public investment 99-03 (Valila et al., 2005, EIB), but also Italy, France, Greece, Holland, Spain, Eastern Europe.
- **India**: PPP since 2005; now 35% of infrastructure projects
- Like Canada, Australia Fed Govt has given state authorities strong guidance to use PPP
- LDC

PPP MAIN CHARACTERISTICS

1. **Bundling** of project phases (DBFO model)
2. Higher **risk transfer** to private sector; "pay for performance principle"; "output specification approach"
3. **Long term** contract (typically 25-30 years)
4. Private **finance**



Typical PPP transaction structure

- **Financially free standing (concession-type)_**

  users fees

  (highways, roads, bridges)

- **Public sector as client (PFI-ype)**

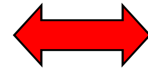
  shadow prices; availability & performance fees

  (Schools,   Hospitals, Prisons)

- **(Joint ventures companies)**

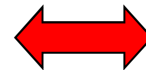
RATIONALE FOR PPP

(i) Private sector more efficient?



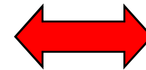
Megginson Netter (2001): not always

(ii) Private finance cheaper?



No; risk premium

(iii) Off balance sheet?



IPPR (2001): no
Eurostat (2004)

THE KEY IS RISK TRANSFER

Efficiency criteria to allocate risk. Often a trade off.

- To minimize **risk premium**: risk must be mainly be borne by the least risk-averse party.
- To give **incentives**, risk must be mainly borne by the party who can best manage it.

Bundling increases incentive power of risk transfer,

and thus of "*pay for performance schemes*"

based on *output*

(**Target on Output**)

Incentives to **increase infrastructure quality** to reduce maintenance/operating cost.

Externalities from construction to management phase are internalized

(+) More incentives to find innovative cost effective solution to output provision.

But careful!

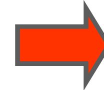
(-) Risk premium.

(-) Also, more incentives to cut cost at expense of quality
⇒ **Need clear and comprehensive measure of quality.**

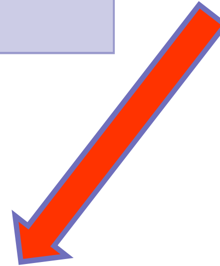
(-) Loss of control on asset owned by private sector

SO WHY PPP?

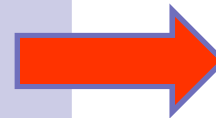
Because bundling of design, building and management in a long term contract..



..creates a single point of responsibility, which makes..



..risk transfer more effective on incentives and..



…favours a "*whole-life approach*" (internalization of externalities)

And for each risk find the optimal risk allocation

- Risk of Misspecification of output
- Design risk
- Construction risk and time schedule risk
- Operation risk
- Demand risk
- Risk of changes in public needs
- Legislative/Regulatory risk
- Financial risk
- Residual value risk

COMPLETION TIME: 76% PPP on time
30% non-PPP

RISK TRANSFER: 22% PPP price renegotiation
73% non-PPP

MANAGEMENT STAGE (survey, PUK, 06)

96% of PS sample were “satisfied” or “more than satisfied”

66 %: “good” o “very good.

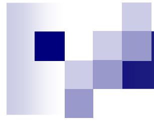
**** **** NO! **** ****

Essential services provision ⇒ **PS bears residual risk**

⇒ If things go wrong, PS picks up the bill.

Example: Metronet, London Underground;

Re-tendering of PPP contracts often difficult because of lack of secondary market and alternative providers



- Crucial role played by institutions and legal enforcement of contracts, dispute resolution mechanisms;
- Need appropriate monitoring. In practice lack of resources and often self-monitoring;
- Commercially (and politically) sensitive information limits outside monitoring. Transparency is important as signal.

1. Higher transaction costs:

5-10% cost of capital independentently of project value (Yescombe, 2007)

2. Longer tendering periods

(from OJ to financial closure):
34 months average

25 for schools

38 for hospitals

- 85 % projects in sample prior to 2004 attracted 3+ bids
- Recently tendered projects : 67 % with 3+ bids; 30% projects with only 2 bids
- Top 10 constructors cover 63% of total sample
- Top 10 hard FM cover 56% of total sample
- Same advisers appointed by public and private sector in turns
- Insurance advisory market more concentrated than other advisory markets

LONG TERM CONTRACTS AND ADAPTABILITY

- 25-30 years length
- Incomplete contracts: many contingencies are unforeseeable, nondescribable, nonverifiable and thus cannot be specified in the contract

(+) Long-term contracts maximizes benefit from **internalization of externalities** due to bundling

But

(-) **Loss of flexibility:** contractor locked-in makes it difficult and costly to adapt the output specifications to new users needs.

***Benchmarking**:* lack of comparable data due to new sectors

Market testing: often no secondary market

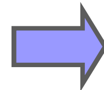
- Informal agreement to obtain flexibility but then sustainability of agreement is problematic.
- Reputational mechanism –vendor rating would help.

Empirical evidence

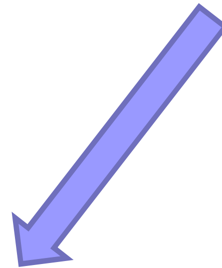
- In UK, output specifications changed during contract negotiations for 33% Central Government Departments PFI projects in 2004 – 2006
- NAO (2003): 55% of contracts changed after being signed
- Changes for £4m per project; 17% project value (NAO, 2007)
- PPP unsuitable for fast-moving sectors (IT services, HMT 08)
- LAC sample 1,000 concessions 1985-2000, Guasch (2004): 30 % renegotiated 26 % by PS

…AND WHY PRIVATE FINANCE?

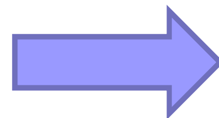
Because large capital value projects with large upfront investments



..need private money at stake for effective risk transfer



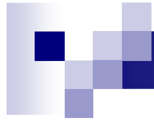
Role of banks, FI



Diluted incentives for operators must be compensated by monitoring by banks

…meanwhile

- PFI now completely dependent on banks. With more bargaining power, banks are asking for 2.5% higher return.
- Current options:
    1. Injecting public money into scheme
    2. Underwriting returns to lender
- But then circular process: banks lend to govt that guarantees returns to banks!
- Less incentives for banks to monitor which reduces value of private finance.



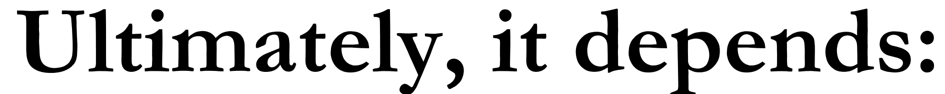
With these trade off in mind, in the health sector should we bundle ?

- Design, Construction & Maintenance of a hospital?

- And Management of the hospital?

- And medical services inside the hospital?

- And Ancillary services such as cleaning, portering, or catering?



Ultimately, it depends:

- Is whole-life costing valuable? Which component, Maintenance? Management? Medical services?
- So (i) is there clear link btw quality infrastructure & value of service, and btw (ii) quality infrastructure & cost of maintenance/management, operation:
- Is quality of service contractible / verifiable?
- Is demand for the service stable?
- Are risks transferable? Are services non-essential?
- Is the legal system (arbitration) efficient?
- Are public officials accountable and well-trained for managing the procurement process?