



INSTITUTIONAL INVESTING IN INFRASTRUCTURE

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How government and institutional investors can lead an infrastructure renaissance



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Lessons learned from the United Kingdom and Europe

Insights on innovative finance in U.K. and European infrastructure

by Georg Inderst

This article gives a brief overview of private-public partnerships (P3) in the United Kingdom and Europe. It covers the development of the P3 markets, their size and relevance. This leads to important insights and lessons for investors and policy makers.

LONG HISTORY OF PRIVATE CAPITAL INVESTMENT IN INFRASTRUCTURE IN EUROPE

Infrastructure investment in Europe has fluctuated considerably over time in terms of volume, structure and the source of funding. Over the past two centuries, the pendulum has swung several times between public, and private-sector dominance of infrastructure.

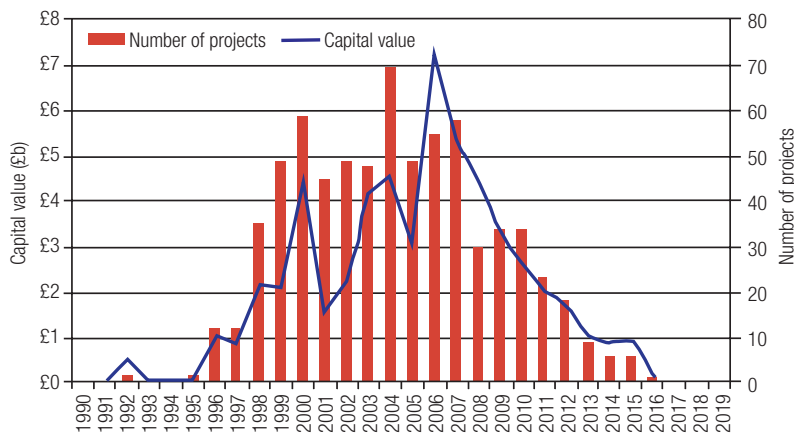
Co-operation between the public and private sectors in financing and operating infrastructure is nothing new in European history. Private investment in roads, bridges and canals has been significant for centuries. “Concession contracts,” have existed for centuries in France and some

other countries. In Victorian times, railways and most other infrastructure projects were built and financed privately.

Post-World War II, a large proportion of infrastructure was nationalized, and the public sector was central to the ownership, financing, and delivery of infrastructure services. In the 1970s, public investment started to falter, as in other Western developed countries, and cracks were beginning to show. Private-sector participation rose in many countries from the 1980s as a result of privatizations of state utilities and, from the 1990s, in a new form with public-private partnership schemes.

There is no single definition of P3s in the modern form. They typically involve a long-term contract between a public-sector authority and a private party to provide a public project or service. It may cover the design, finance, construction, operation and maintenance of an infrastructure asset, and the delivery of

PFI project numbers and capital values



Source: HM Treasury (2019)

associated services to an agreed standard. Incentive structures and the sharing of the various risks depend on the specific contract.

In-between pure public and private provision of services, rather different P3 or concession models of mixing public and private responsibilities are at work in different sectors, countries and at different levels of government. P3 laws, regulations and models vary considerably across European countries.

The United Kingdom, Australia and Canada were early adopters of P3s in the modern form; many other countries soon followed. Although Europe still has the highest number of projects, North America, Asia and Latin America have become more active in recent years.

THE U.K. AS AN EARLY ADOPTER OF P3S

The United Kingdom became a leading country for private capital investments in infrastructure for several decades. In the first wave, there was a widespread privatization of telecom, water, gas, electricity, airports and rail assets, from which the U.K. model of regulated asset base (RAB) evolved. In the 1990s, the focus shifted to social infrastructure, where new ways of financing through private capital emerged, and the United Kingdom developed extensive experience with P3s.

Post-financial crisis, infrastructure investment moved up the political agenda, and economic infrastructure sectors once more became a priority. The U.K. state has become more interventionist and activist in its infrastructure policies. It developed national infrastructure plans and project pipelines (since 2010), as well as new institutions and policy instruments. The socio-political pendulum has swung back markedly toward tougher regulation, higher public investment and

greater interventionism, if not nationalization — arguably in some other countries, as well.

In the United Kingdom, P3s are not used for all infrastructure sectors but are concentrated on social infrastructure, municipal waste management and on transport projects — e.g. some motorways, tunnels and bridges (starting with the Channel Tunnel by a French-British consortium in 1986).

The U.K. Private Finance Initiative (PFI) is a form of P3. It was announced in 1992 as an alternative financing and procurement method, whereby the private sector finances, builds and operates infrastructure, while the public sector pays for services over the project life under a long-term concession agreement (“availability payments”). Most of U.K. PFI follows the DBFO model (design, build, finance and operate) or BOOT model (build, own, operate, transfer) of private sector participation.

THE PRIVATE FINANCE INITIATIVE EXPERIENCE

Given its historical importance, it is worth having a closer look at the PFI. U.K. government statistics show about 700 PFI projects in 2018, with an aggregate capital value of £59 billion. The value of PFI projects has been declining from a peak of £7.2 billion in 2006 (about 0.5 percent of GDP) to nearly zero (see, “PFI project numbers and capital values,” above). This procurement method accounted for about 25 percent of public-sector capital investment between 2000 and 2012. PFI was the dominant procurement method in some sectors, accounting for 70 percent of schools and 60 percent of hospitals.

Over the period 1992–2012, the majority of PFI capital went into social infrastructure: hospitals, £14 billion (24 percent); schools, £12 billion (21 percent); and other buildings (e.g., fire and police, courts, service centers), £5 billion (9 percent). In terms of economic infrastructure, transport projects had a total capital value of about £8 billion (13 percent), and waste treatment at £5 billion (8 percent) over the 20 years. In terms of size, only six projects had a capital value greater than £1 billion, mostly in transport or defence.

RISE AND FALL OF PFI

Opinions on PFI were polarized from the beginning. Some saw PFI contracts as a reference model for Europe and beyond. Many countries around the world looked at the U.K. experience and made adjustments. Others disliked PFI, and P3s in general, for all sorts of reasons, ranging from the technical to the ideological.

Proponents of P3 emphasize the additional financing coming from the private sector, speedier development, and cost-efficient operation and maintenance. Governments can save the capital needed for upfront investment, can act as regulator and standard setter for service quality, and will ultimately gain control of the assets.

PFI was criticized for many reasons: too expensive, too opaque, too slow and too rigid. According to critics, the private sector could make windfall gains despite the “low-risk” nature of availability-based payments by the public sector. The risk transfer and potential future liabilities for the public sector were unclear. Some projects were unsuitable for PFI, but there was an incentive to offload them from the public books.

A modified approach introduced in 2012 — called PF2 — had little success. With PF2, the government tried to address the criticisms with a number of changes, including:

- a minority equity stake for the public sector
- third-party funding competitions for a portion of equity
- consideration of debt solutions other than bank loans
- cheaper and faster procurement, with a maximum duration of 18 months
- standardized documentation in the procurement process
- more-flexible service contracts (making renegotiation easier)
- measures to improve transparency for both public and private partners.

Some risks were transferred back to the public sector, however, and most of PF2 was still outside the normal public accounts. In a 2016 report, the Office for Budget Responsibility (OBR) estimated the present value of obligations for future PFI payments was £190 billion of which £114 billion rested with the central government, £72 billion with local authorities and £4 billion with public corporations. In 2018, the National Audit Office found that “value for money” for the taxpayers was questionable. As the wall of opposition rose, the U.K. government abandoned the whole PFI venture in 2018, citing two main reasons: inflexibility and fiscal risk to government.

The current U.K. government would still like to see private-sector participation in some user-paid sectors, such as (clean) energy and digital infrastructure. There is also an attempt to relaunch the RAB model to other sectors, but

there is little clarity on the infrastructure strategy, even less so during the coronavirus crisis.

DEVELOPMENT OF P3S IN CONTINENTAL EUROPE

European P3 volumes had been rising from the 1990s to the mid-2000s. According to figures from the European P3 Expertise Center (EPEC), 2007 was the peak year, with €28 billion. Volumes have been trending down since, reaching a level of about €10 billion from 29 transactions in 2019 — i.e., less than 0.1 percent of GDP.

Over the full reporting period 1990–2019, EPEC registered about 1,800 projects with a total volume of €368 billion (see, “EU P3 projects in social infrastructure sectors, 1990–2019,” page 38). In terms of numbers, 70 percent of projects were in social sectors, of which 24 percent in education and 22 percent in healthcare. In terms of capital value, however, transport is by far the strongest sector across Europe (share of 56 percent), while healthcare and education captured a share of 14 percent and 10 percent, respectively. Environment/energy and communication volumes have lately been growing from low levels. Social infrastructure projects tend to be much smaller than economic infrastructure projects (i.e., value of about €110 million compared with €430 million).

Looking at more recent trends, P3s are now somewhat more evenly spread across countries than in the past. In the past, the United Kingdom accounted for nearly half of European P3 volumes, but the share has declined substantially due to the sharp fall in PFI deals in social infrastructure. Over the past five years (2015–2019), Turkey moved into first place with a volume of about €22 billion, followed by the United Kingdom (€12 billion), France (€12 billion), Netherlands (€6 billion), Germany (€4 billion) and Italy (€3 billion).

P3 bonds had a very modest recovery post-2013 in a few countries. Institutional investors are slowly becoming more active on the debt side of P3 projects, especially larger economic ones. The shift from social to economic infrastructure in recent years is also reflected in a renaissance of the user-pay model, such as large transport or (French) broadband projects.

In summary, various P3 arrangements have been established across Europe since the 1990s/2000s. Many countries, such as the United Kingdom, France, the Netherlands, Germany, Spain, Greece, Turkey, and others, had periods of strength but also of weakness. Overall, the contribution of P3s to infrastructure

EU P3 projects in social infrastructure sectors, 1990–2019					
1990–2019	Project number	%	Value (€b)	%	Average value (€m)
Transport	384	21%	€205	56%	€534
Environment	135	8%	€22.3	6%	€165
Telcos	20	1%	€4.3	1%	€215
RDI	2	0%	€0.2	0%	€100
Economic infrastructure	541	30%	€231.8	63%	€428
Social infrastructure					
Education	434	24%	€35	10%	€81
Healthcare	387	22%	€50	14%	€129
Public order and safety	144	8%	€12	3%	€83
Defense	56	3%	€18	5%	€327
General public services	75	4%	€7	2%	€97
Housing and community services	83	5%	€7	2%	€89
Recreation and culture	79	4%	€7	2%	€85
Social infrastructure	1258	70%	€136	38%	€109
All P3s	1799	100%	€368	100%	€205

Sources: EPEC Data Portal (July 2019); author's calculations

investment is still small, – 0.1 percent of GDP (and globally). In fact, European investment volumes have been falling from their best years in the mid/late-2000s.

KEY LESSONS LEARNT FROM EUROPEAN P3S

Micro perspective: P3s can work

P3s potentially provide innovative and useful solutions for infrastructure problems across a broad range of economic and social infrastructure sectors. Experience shows that P3 projects can work well when the conditions are right and the partners — public and private — take a collaborative, responsible approach not only at the outset, when contracts are negotiated, but also over the whole life. Good ongoing management and maintenance is essential.

Macro perspective: limited potential

Several countries in Europe and worldwide have seen periods of sizable P3 activity, at least temporarily. Even during the best periods, however, P3s only make a small contribution to overall infrastructure investment (currently a contribution of about 2 percent to 3 percent to total infrastructure spending globally). It is not easy to scale up over a longer period, and there have also been setbacks in various countries.

Efficiency and quality: mixed evidence

The key purpose of modern P3s is — by involving the private sector — to enhance the efficiency and quality of infrastructure provision compared with traditional public procurement. Empirical research finds mixed evidence on this (e.g. Vällilä 2020), *An overview of economic theory and evidence of public-private partnerships in the procurement of (transport) infrastructure* - Utilities Policy 62. Good P3s can use private sector expertise to find ways of dealing with the notorious delays and cost overruns in infrastructure. Some P3s keep delivering good services longer-term, but there are also complete failures. There is a potential trade-off between (excessive) cost management and (lowering) of service quality.

Relief for public budgets?

A key motive for governments is that private financing of infrastructure projects would free up government funds for other purposes. Academics are more skeptical about this claim, certainly over the long-term costs of funding. Shorter term, it depends on how public budgets account for P3s. Also, over time, “off-balance sheet” may become “on-balance sheet” items, and risks may revert to the public sectors — expected or unexpected. In addition, most governments can borrow capital very cheaply these days, given low interest rates.

Complexity

In practice, long-term contracts between public and private partners are difficult to design and monitor. P3s are very delicate return- and risk-sharing arrangements. There is a high degree of complexity, with typically high set-up costs. But it is not easy to standardize P3s as the appropriate risk allocation is very project-specific. Contract renegotiations are a difficult territory in theory and practice Engel, E., Fischer, R. and Galetovic, A. (2020), *When and How to Use Public-Private Partnerships: Lessons from the International Experience* - NBER Working Papers Series 26766.

RISK SHARING IN A CHANGING WORLD

Even when a public-private deal is “right” today, it may not look so tomorrow, given changes in technology, regulation, consumer preferences and other market dynamics. Agreed-upon risk allocation easily becomes inappropriate over time. Some examples: The private side may have been too aggressive in the bidding process. The public side is often much less willing or able to manage macro risks than hoped. When ‘excess profits’ materialize or highly indebted projects hit the public budgets, we see a backlash from the media and the voters.

WHERE BEST TO USE

There is an academic view that P3 works best with user fees. The link between asset quality and service quality is typically stronger, in roads and ports than in hospitals and schools, for example, which makes them more difficult to contract and renegotiate. Such issues tend to be even stronger in developing countries with weaker institutions and governance (Estache 2010), *Infrastructure finance in developing countries: An overview* - EIB Papers, Vol. 15, No. 2.

In practice, availability payments from public authorities are standard for P3s in the health and education sectors and for some transport projects. They are typically linked to performance criteria. Various contract types and payment systems exist. Each country and sector has its own ways of bundling together multiple project phases or functions, facility development, or services.

CONSISTENT P3 PIPELINE NEEDED

These days, much institutional capital is flowing to areas where cash flows are thought to be better captured, such as renewable energy, digital infrastructure and alternative real estate (e.g., student accommodation, care homes and affordable housing). One of the main hurdles for investors is the lack of investable

infrastructure projects and assets. Governments at all levels need to get their acts together to enlarge and enhance the pipeline of investable infrastructure projects. P3s can still play an important role in this.

RECOMMENDATIONS FOR INVESTORS AND POLICY MAKERS

Some lessons have been learned over the years, in Europe and elsewhere, about infrastructure investment and private finance. There is good guidance available from national and international institutions on how to set up and manage P3s. Putting them into practice, comes down to political realities. Recommendations include:

1. Consistent infrastructure and P3 policies with a clear, stable regulatory framework and good public governance. Develop national infrastructure plans, audits and capital stock assessments, including the private-sector investments and P3s.
2. No retrospective changes of rules and regulations. P3 systems especially require much time and a high degree of trust to succeed. A notion of “value for money” should be defined, agreed and also understood by the public.
3. Strengthen the public-sector capabilities for procurement and contracting processes not only in central government, but also at the important sub-national levels, where much of the infrastructure provision actually happens.
4. P3s also require strong capabilities and commitment on the private side, with adequate corporate governance and clear accountability.
5. Improve transparency and disclosure on P3 infrastructure projects, including on environmental, social and economic (ESG) impact. Better data availability, transparency and quality would be a public good in itself.
6. Good communication: P3s operate in sensitive areas in the economy and society. The public will insist on more transparency, quality improvements, sustainable practices and “social purpose” — even more so from private owners and operators of public infrastructure. Investors will need to do more than “green-washing” and “social-washing” with ESG paperwork. Credibility of private and public partners is crucial. ❖

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