

# **The Economic Benefits of Infrastructure Projects Procured with Private Finance**

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**Key words:** Infrastructure, Projects, Private Finance, PFI, PPP.

## **ABSTRACT**

The world's need of efficient infrastructure is universally acknowledged.

In the emerging economies of the world the need is for new infrastructure: water treatment, power, transport, etc; facilities to aid economic growth and achieve continued social improvement: schools, hospitals, etc. Infrastructure in the mature economies is often ageing with relatively high maintenance and repair costs.

There is need for continual investment into renewal and new construction to give all communities equal opportunity to prosper in the global economy. The amount of investment required varies from country to country but it is massive.

The private sector can provide that finance and use its expertise to manage the risks during the construction of projects. Its management skills can be similarly applied to achieve cost effective operation and maintenance of the constructed facilities.

The benefits of using private finance include:

- fully developed business case for the project
- appropriate allocation of the risks
- proper consideration of all procurement options
- competitive bidding for contractor selection
- innovation in project design and construction.

The economic benefits of private finance begin at the feasibility stage of a project because the owner/promoter is obliged to focus on the performance requirements rather than the processes of finance and construction. Performance can be measured throughout the operational life and sanction applied for failure.

Projects with clearly defined objectives and carefully specified performance requirements contribute to the economic and social benefit of all.

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# **The Economic Benefits of Infrastructure Projects Procured with Private Finance**

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## **1. INTRODUCTION**

Infrastructure is the adoption and adaptation of natural features and the man made installations that facilitate and support our civil society.

It is the channels, pipes, conduits and apparatus that sustain our communities by delivering water and power, protecting us from flood and taking away our detritus; it is the roads, railways, airports and harbours that allow safe and efficient movement of people and goods between those communities. In a wider definition it is the buildings and facilities where we are educated and cared for in sickness. There is also military infrastructure that provides for and supports the paraphernalia of defence and aggression.

The development, maintenance and renewal of infrastructure have been continuous through the ages and the modern world's need of efficient infrastructure is universally acknowledged. However, the quantity and quality of the world's current stock of infrastructure generally reflects the contemporary economic prosperity of its respective communities. Therefore, there are all of the usual imbalances across continents and between and within nations. In the emerging economies of the world the need is for new infrastructure: water treatment, power, transport, etc; and the facilities to aid economic growth and achieve continued social improvement: schools, hospitals, etc. Infrastructure in the mature economies is often ageing with relatively high maintenance and repair costs.

There are, and, of course, rightly, justifiable concerns about the sustainability of infrastructure developments but inefficient infrastructure is itself harmful to the environment, e.g., the waste and pollution caused by vehicles idling on congested roads. Such concerns must be addressed and answered in the engineering of projects.

There is need for continual investment into renewal and new construction to give all communities equal opportunity to prosper in the global economy. The amount of investment required varies from country to country but it is massive.

## **2. HISTORY**

Through the eighteenth and nineteenth centuries many of the great infrastructure developments in the United Kingdom (and, indeed, elsewhere in the world) were promoted and financed by engineers and private capital. Their pay back was provided by the fees and charges levied from the users of the completed projects. This meant that developments such

as new railways were built only where favourable income streams could be predicted from the completed projects. And, of course, there were financial as well as engineering disasters.

During the twentieth century for social and political reasons government often took on the rôle of promoter and provider of infrastructure. Usually this was for new projects but sometimes, because of either the profligacy and failure of the private promoter or for political ends, government took over existing infrastructure. Thus did infrastructure development, maintenance and renewal come to be a charge against general taxation.

The (almost) inevitable consequence of this was a lack of investment or, at best, haphazard investment in times of budgetary surplus. There was also, some would say, a corresponding failure of managerial responsibility resulting in the neglect and deterioration of the infrastructure.

Whatever, in the UK of the 1980s and 1990s it was the will of the popular vote that it should pay less tax. The government needed, therefore, new ways to obtain investment into the nation's ailing infrastructure. It was also challenging the established practice whereby government commissioned, owned and maintained the facilities from which it provided public sector services.

### **3. THE PRIVATE FINANCE INITIATIVE**

The intent of the Private Finance Initiative (PFI) policy was to have private sector companies provide the investment necessary to construct new infrastructure projects and to modernize some of the existing, but neglected, facilities. Above all it was intended to avoid public sector spending on capital projects and to transfer much of the financial risks of those projects from government to the private sector. Government hoped also to improve the overall efficiency of the completed projects by using the private sector's management skills in operation and maintenance.

The PFI made a slow and uncertain start because it brought completely new concepts to the public sector promoters of projects. The private sector, too, had its difficulties in the beginning. By 1997, five years after its introduction, the PFI had achieved much hard won experience that had translated into the launch of a number of projects.

The general election in 1997 brought a change of government. Although not ideologically opposed to PFI it was politically expedient for the New Labour government to instigate an examination of the policy. The resulting reviews led to a change of emphasis in the policy and its rebranding as one of Public/Private Partnership (PPP).

Following the hiatus in closing deals caused by the election and the reviews, the changes did result in a new impetus and commitment to the policy. The flow of deals has increased and the body of experience in putting together successful deals has grown considerably. It is reported that at the end of 2001 more than 450 deals had been signed with a lifetime value of £100 (US\$ 150) billion.

In October 2001 a UK Treasury minister was quoted as saying, “PPPs will help us ensure that complex and expensive projects are managed efficiently, delivering on time and to budget. They will ensure that risk is managed effectively.”

PFI/PPP is not privatization of public services – as specifier and paymaster the public sector retains complete control of its service provision.

#### **4. THE ECONOMIC BENEFITS OF PFI/PPP PROCUREMENT**

Government and the private sector have invested much time and effort into it and a body of experience has been built up for PFI/PPP procurement. A number of base models have been developed but primarily the process is driven by the needs of each project as brought out by its business case.

From the author’s experience, observation and study the following benefits may be argued to flow from the PFI/PPP procurement method:

- fully developed business case for the project
- appropriate allocation of the risks
- proper consideration of all procurement options
- competitive bidding for contractor selection
- innovation in project design and construction
- value for money testing of contractor proposals
- change mechanisms embedded in the contract
- collaborative approach to project implementation
- development of longer-term relationships
- reduction of political risk
- opportunity to develop and enhance user choice.

##### **4.1 The Business Case**

Irrespective of who promotes an infrastructure project they must first confirm the need for it with a fully developed business case. In a world of limited resources the business case must clearly demonstrate the value of the proposed project by cost/benefit analyses that take account of all short, medium and long-term factors. In many instances through the nineteenth and twentieth centuries infrastructure projects were valued using only a narrow definition of economic cost/benefit. The development of the global economy increasingly gives recognition to the need to hear and heed all those likely to be affected by a project. The

decisions must be made on a fair balance of all factors and that will include any impacts on the generations that follow ours.

Performance/output requirements.

## **4.2 Allocation of Risk**

It is important to understand the several categories of risk that accompany a project. Equally it is neither realistic nor cost effective for the public sector to seek to place all risks with the private sector contractor. What works is an appropriate allocation of each risk whereby the party best able to manage that risk takes it on.

There will be projects where the nature of the inherent risk(s) is such that it would be impossible or uneconomic to transfer it. It may then follow that if the risk(s) cannot be transferred then there would be no benefit from using the PFI/PPP procurement route.

The subject of risk has many facets and aspects of which are dealt with by my colleagues in another paper.

## **4.3 Procurement Options**

The developed business case and the identification and prospective allocation of risk should lead to fullest consideration of the procurement options. Whichever option is chosen a detailed procedure and plan should be drawn up so that the process may be managed effectively and fairly scored for all bidders when tenders are evaluated.

The procurement process should include very careful pre qualification criteria for the contractors to be invited to tender for the project. Each contractor should have unquestionable business integrity and probity, sufficient financial and managerial resources and, preferably, significant previous experience of similar projects. However, in the early development of the PFI/PPP market place in a country greater reliance will have to be placed on the first two qualifications.

## **4.4 Competitive Bidding**

The invitation to tender should be thoroughly prepared, checked, cross-checked and complete – it is a marker of the promoter's (and its advisors!) quality and potential as a client if innumerable amendments have to be issued during the tender period. It will also reduce the need to "clarify" a tender during appraisal.

When tenders have been totally evaluated and scored the proposals of the preferred bidder(s) may need to be further scrutinized and tested. However, in the European Union (at the time of preparing this paper), there may be very strict limits to clarifying the bid(s) of the preferred bidder(s).

The costs of bidding are high but the prospect of sensible returns on the investments is attractive and serves the long-term interests of an efficient and profitable construction industry.

Concession periods and Special Purpose Vehicle companies.

#### **4.5 Innovation**

Whilst the extent of innovation may be constrained for some types of infrastructure project (public highways, for example, because of the planning approval processes) every encouragement should be given to contractors to innovate. The innovation in design and construction may come from the freedom inherent in the PFI/PPP process and/or from the contractor's retained engineers or joint venture partners (domestic or foreign).

The contractor will also seek opportunities to innovate in the operation and maintenance through the concession period.

#### **4.6 Value for Money (VFM)**

In infrastructure projects the value for money testing of the contractor's proposals should be substantially reflected in his bid price that will account for both the capital cost of construction and the subsequent operation and maintenance costs. The contractor has every incentive to optimize his performance.

#### **4.7 Change Mechanisms**

It is unlikely that the circumstances prevailing at the time of signing the contract will prevail through the lifetime of the project concession. Therefore, contracts must provide predictable mechanisms to effect mutually agreeable changes. The objective should be to recognize and deal with changes and to establish the confidence and respect that avoids disputes.

#### **4.8 Collaboration**

The extent of and provisions for collaboration will vary according to the specific needs of the project and its parties. The issues to be addressed include whether or not to have formal partnership arrangements, open book accounting, co-location of staff, etc, etc.

#### **4.9 Longer-Term**

It should be more than a forlorn hope that success in the extant project will build longer-term relationships based on experience and trust. Continuity of workload enables contractors to plan for the future and to invest in training and skill development for their staff.

#### **4.10 Political Risk**

It is now probably the case, in the UK, that the risk of political interference in the workings of a signed up PFI/PPP contract is low. (Although the shareholders of the bankrupted Railtrack company may beg to differ from this view.) However, as a risk over the lifetime of a contract it may be expected to be less than under traditional contract arrangements.

## 4.11 User Choice

Across the wider spectrum of PFI projects, i.e., including those that are for more specific “service” provision there should come to be more choice for end users.

## 5. CONCLUSIONS

The economic benefits of private finance begin at the feasibility stage of a project because the owner/promoter is obliged to focus on the performance requirements rather than the processes of finance and construction. Performance and service levels can be measured throughout the operational life and financial penalty applied if the contractor fails to achieve the agreed outputs.

Projects with clearly defined objectives and carefully specified performance requirements contribute to the economic and social benefit of all.

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## BIOGRAPHICAL NOTES

**Andrew Morley** is Managing Director of CCM Associates Limited the quantity surveying/construction economics business he formed in 1987. He had previously worked as commercial manager for international contractors and chartered quantity surveyors in Europe, the Middle and Far East and Africa.

Much of his company’s work in recent years has been the provision of technical and commercial services and advice to contractors bidding for PFI/PPP projects. The company also undertakes pre and post contract services for infrastructure projects procured by traditional forms of contract. It is his experience of both of these procurement methods that persuades him that, in most cases, the PFI/PPP route is to be preferred.

Andrew is a Fellow of the Institution of Civil Engineering Surveyors (ICES) and a Member of the Chartered Institute of Arbitrators. He is a past member of council of the ICES and has served on many of its committees. Currently he is ICES delegate to FIG’s Ad hoc Commission 10.