

PUBLIC-PRIVATE PARTNERSHIPS IN UK INFRASTRUCTURE DEVELOPMENT: THE MACROECONOMIC PERSPECTIVE

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The construction industry's contribution to UK's gross domestic product (GDP) is in excess of 5%. Hence any attempt aimed at improving productivity and efficiency should naturally have a positive effect on the economy. The Private Finance Initiative (PFI) was introduced in 1992 by the UK government as part of a strategic rethink aimed at not only harnessing private sector efficiency gains in its infrastructure development and rehabilitation effort but primarily as a means of easing the burden on public debt by reducing the Public Sector Borrowing Requirement (PSBR) through the effective utilization of private capital by way of Public-Private Partnerships (PPPs).

Set against the background of macroeconomic development theory, the paper reviews the central objectives of the PFI/PPP and examines how far the strategy is addressing the issues of growth and development. The evidence so far is that some of these growth determinants are being manifested. However there is the need to do some more empirical research on the projects that have been completed and running.

Keywords: infrastructure, macroeconomics, public private partnership, investment, procurement

INTRODUCTION

Construction being a key industry plays a major role in the socio-economic development of countries and contributes substantially to the Gross Domestic Product (GDP). According to Olomolaiye *et al.* (1998), the industry's annual contribution to gross national product (GNP) is in the region of 10% for most nations and about 6-8% for the UK and the USA. It is also estimated that of the working population in the UK, about 1 in 14 people are involved in construction (CITB, 2001). In 1998 alone, an estimated total of \$3 trillion was spent on construction worldwide, with the UK ranking 5th in the world at a total of \$104.9 billion. (Crosthwaite, 2000). Public sector expenditure incidentally constitute the largest proportion of this huge construction spend. Governments all over the world are therefore constantly seeking alternative procurement strategies so as to free these huge chunks of their national revenues that go into the provision of infrastructure and re-channel them into such other areas as welfare, health, etc, in order to promote economic growth and stability.

Though there is the growing recognition that UK's infrastructure needs urgent renewal and modernization, public sector net investment has been declining over the years. Figure 1 and 2 portray a vivid picture of this. It has for instance been estimated that traffic levels on UK roads will continue to rise from a level of 455 billion vehicle-

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kilometres in 1998 to 478 billion in 2001 and 524 billion in 2006 (Office for National Statistics, 2000). This phenomenon will thus put increasing pressure on the existing road infrastructure and increase traffic congestion which has been estimated to be costing a colossal sum of over £20 billion annually within the UK (Kinnock, 1998).



Figure 1: Public sector net investment
Source: HM Treasury (1998)

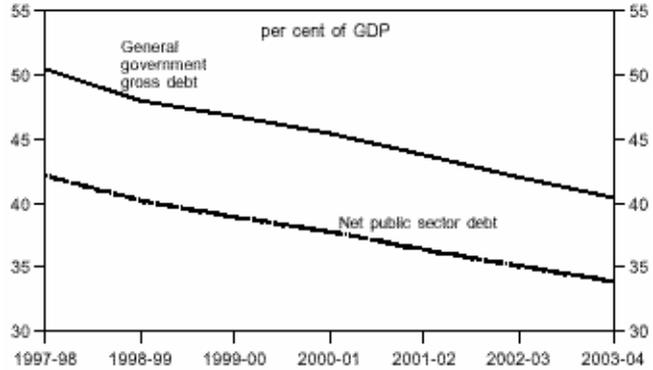


Figure 2: Public sector debt
Source: HM Treasury (1998)

Against this backdrop of reduced public investment and the increasing pressure on the existing infrastructure, the PFI was launched in 1992, aimed primarily at encouraging the private sector to invest in the nation’s infrastructure by way of PPPs so as to increase the flow of capital projects.

As part of an ongoing PhD research into the PPP procurement strategy, with particular emphasis on developing a broader outlook into host country risks, this preliminary review examines how far the central objectives are addressing the issue of growth and development.

THE CONCEPT OF GROWTH AND DEVELOPMENT

According to Brinkman (1995), within the older literature, economic growth referred to a *quantitative* increase in the per capita GNP while development entailed the *qualitative* changes in institutions and structures. However modern neoclassical definitions tend to treat both growth and development as conceptual equivalents. Though a whole range of concepts have been propagated for economic growth and development, as cited in Brinkman (1995), Scott (1989) identified investment as the engine of growth, while others like Schumpeter (1954), Solow (1957), Kuznets

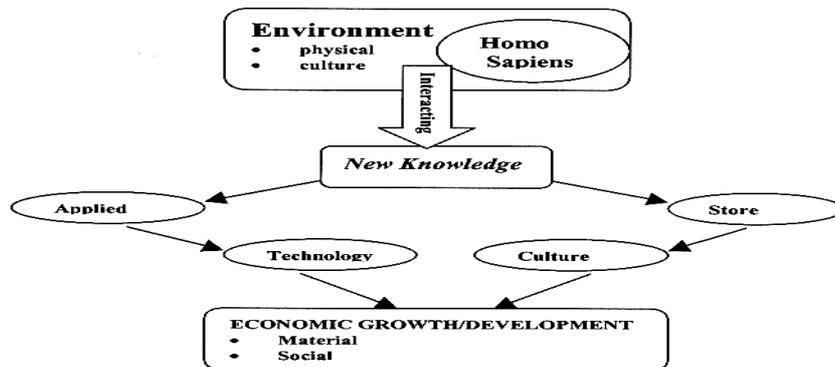


Figure 3 The Dichotomy of Useful Knowledge
Source: Adapted from Brinkman (1995)

(1965), and Romer (1990), identified technological change as being at the heart of economic growth. The efficient allocation of resources has also been recognized as a primary factor within the concept of economic development.

The development, dissemination and advance of useful knowledge, in particular scientific knowledge, has also been identified by Kuznets (1966), as a crucial contributing factor to economic growth. As cited in Ruttan, (1998), this view was also shared by Romer (1986) who argued that long-run growth is driven primarily by the accumulation of knowledge by forward-looking profit maximizing agents and that the creation of new knowledge generates positive external effect on the production of technology. As indicated in figure 3 the interaction of mankind with the environment encompassing culture and the physical world originates new knowledge and knowledge appears in its application as technology and in its store as culture. Brinkman, (1995) describes this as the dichotomy of useful knowledge.

The works of Harrod (1939), Domar (1946) and Griliches (1992), as cited in Ruttan (1998) recognized that investment is both capacity-creating and income generating and that technical change is the result of conscious economic investments. This provided the tool for development economist and planners that growth requires sustained rise in investment and savings. Griffin (1999) also drew conclusions from his empirical studies on developing economies that economic growth and expansion are impossible without investment. Other factors such as economies of scale and institutional reforms placing greater emphasis on private participation, have also been identified as determinants of growth (Chen and Feng, 2000). Many other works such as those of Balassa (1978), Fosu (1992), as cited in Aiello (1999), have also demonstrated that there is a positive correlation between the growth of exports and economic growth.

THE PFI/PPP AS A GROWTH ORIENTED STRATEGY

Efficiency in resource utilization

It is argued that the concept of the PPP as exemplified by the PFI is first and foremost a method of procurement which seeks to achieve best value for money by focusing on the genuine transfer of risks (Private Finance Panel, 1996). By putting emphasis on placing a contract for providing services rather than any particular asset, procurement through the PFI/PPP route is therefore thought to have in-built efficiency gains that outweigh the higher financing cost associated with private sector borrowing. Citing, the Wycombe and the Amersham hospitals as an example, the PFI solutions were found to be actually more radical in the layout of the site and the quality of the buildings than the ones that were originally proposed by the public sector. The result that the total scheme was both lower in cost and preferred by the clinicians because they regarded it as of a better value (House of Commons 1996).

With funding costs built into the unitary payments under PFI/PPP procurement as a project cost, healthy competition amongst funders to reduce funding costs would thus be an advantage to the public sector procurer. As noted by the Scottish Office (1996), the presence of equity in the financial structure of PFI/PPP projects is therefore one of the key factors that should drive efficiency within the private sector management of PFI/PPP projects. Additionally, lenders to the private sector tend to be very much directly concerned with the quality of the projects they are funding. Before deciding to lend towards the cost of projects, financial institutions apply very rigorous assessment of the risks of making the investment and thereafter, maintain close scrutiny over the

projects. This may not necessarily be the case when these financial institutions lend to governments as they are more or less guaranteed the repayment.

It has for instance, been noted that designers for projects procured directly by the public have had the long standing complaint of not being allowed to build to the required standards because of budgetary constraints (House of Commons, 1996). However, by transferring to the private sector the responsibility of designing, constructing financing and operating the scheme, the private sector would consider the obligations as a whole over the specified life of the contract, taking full account of the risks inherent at each stage, including the long term maintenance costs. A direct relationship therefore exists between the way a scheme is designed and constructed and its whole life operational cost. With the private sector choosing how to provide the service to the level specified by the sponsor and appropriate risks allocated to the party best able to manage them, this should lead to an efficient service and a lower whole-life cost. In a case study on eight PFI design, build, finance and operate road contracts, cost savings compared with the public sector comparator averaged 15%. For road projects, because the operators would be paid each year primarily according to the level of usage of the road, their income will vary as traffic varies. Making them take a share of the traffic risks in this way, it is hoped, would help establish a private sector road operating industry which will be sensitive to road usage and open up the avenue for more efficient construction and maintenance practices (Highway Agency, 1997).

One objective of the PFI/PPP is to minimize claims by transferring responsibility to the private sector in order to achieve value for money. In the traditional form of procurement for example, claims could be made for unforeseen design errors, etc. A study conducted by the National Audit Office on a sample of 42 traditionally procured road projects, revealed an average increase of 28% between tender and out-turn price (National Audit Office, 1997). An important dispute prevention technique within the construction industry is the equitable distribution of risks. Another dispute prevention technique is the use of positive contractual incentives to reach certain performance results which have an effective means of aligning the contractor's goal with the client. These can encourage superior performance and discourage claims oriented conduct. In a study into the top causes of contractual disputes in the USA, failure to deal promptly with changes and changed conditions and owner changes which disrupt the flow of the contractor's work, were identified as the highest ranking causes of disputes (Diekmann and Girard, 1995). The principles underlying the PFI/PPP procurement process attempt to effectively eliminate these problems as design responsibility rests with the private sector and the partnership approach is founded on win-win scenario.

Investment and structural transformation

The UK government's objective has been focused towards reducing public spending to below 40 per cent of GDP. The injection of private capital investment and expertise through the PFI/PPP is therefore a key factor in reconciling the need for sound public finances with acceptable levels of taxation and huge investment in infrastructure. As at March 2000, over 430 PFI/PPP projects with estimated capital value in the region of £32 billion have either been procured or at various stages of the procurement process nationwide covering all sectors of the economy from education, health, transportation through to defence (DETR, 2000). Figures 4 and 5 provide a vivid picture of the PFI/PPP project landscape as at March 2000.

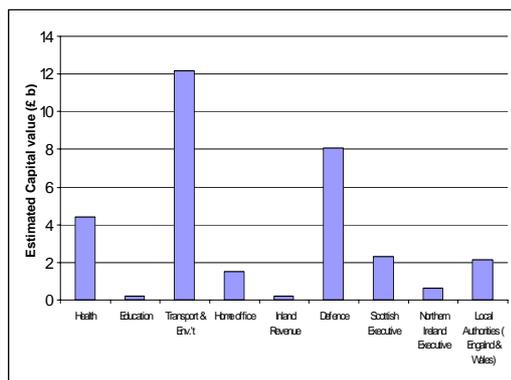


Figure 4: Estimated Capital Value of PFI/PPP projects as at March 2000
Data source: DETR (2000)

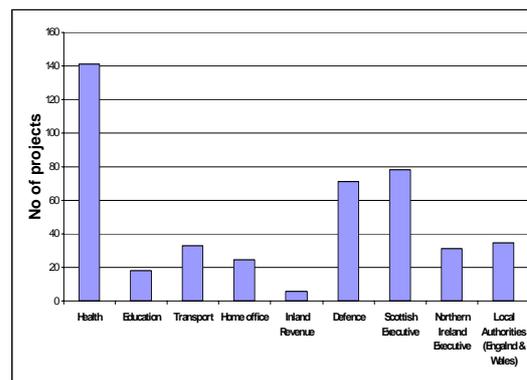


Figure 5: Total number of PFI/PPP projects as at March 2000
Data source: DETR (2000)

Within the financial sector, new products are emerging. Nubben and McIntosh (1997) for instance, noted that in March 1997 NatWest Markets had converted almost £1bn of British housing association loans into bonds in a PFI securitization exercise. A number of other PFI investment funds such as the Innisfree and BZW, are being set up with the likelihood of being floated on the stock market. This represents a healthy sign as the input of financiers could be courted earlier and thus minimizing the chronic delays in reaching early financial close. With concession periods set beyond the range of conventional debt, financial innovation should be encouraged through the use of alternative sources of funding. There is also the possibility of re-financing after the completion of construction, all of which can provide financial benefits. For instance, there are proposals to include 'claw-back' clauses in future PPP contracts for the public sector to benefit from the anticipated windfall gains through refinancing. Currently, about £50m are expected to be realized from the refinancing of six completed PFI/PPP hospital project (The PFI Report, 2001).

The professional consulting industry is equally experiencing some structural changes. With bidding consortium being led by large construction firms, the initial fear was that the larger construction firms would use their economic might to muscle the consulting firms out. This fear however has largely proved unfounded since the consortia are invariably depending extensively on the services of consultants and advisers, with some participating as equity partners. They are also actively participating in the process as advisers to the public sector procurers in financial, legal and technical disciplines.

Knowledge formulation and diffusion

During the procurement of very complex PPP projects, transaction teams consisting of members of the sponsor agency, legal, technical and financial advisers from consulting groups are constituted after receiving intensive training in team building and negotiating skills in helping to evaluate the bids and subsequently negotiate with the bidders. This process should substantially help in achieving better value for money by awarding the projects to only bidders with financially and technically robust offers and not necessarily the cheapest.

The same team building effort takes place within the consortiums. This should therefore help the development and diffusion of both tacit and explicit knowledge. One noteworthy benefit of a PFI competition organized by the Prison Service for the Bridgend and Fazakerley prisons was the opportunity of accessing overseas expertise in prison construction and operation. Three of the five bidders had overseas partners in the consortium i.e. American and French. The winning consortium, Securicor/Costain added Skanska, a Swedish construction, as one of the partners. They also carried out research into American prison design and operations that contributed to the innovative aspects of their proposals (National Audit Office 1997). The most important resources have been recognized as knowledge based. According to Hall (2000), for new joint capability to be developed from existing capabilities which are most likely to be underpinned by tacit knowledge, these tacit knowledge bases could best be shared through the process of frequent physical proximity, shared experience and the development of trust.

Under the DBFO road projects undertaken by the Highway Agency, the agency noted that some bidders also applied value-engineering techniques throughout the procurement process to reduce construction cost by optimizing the Agency's design. The National Audit Office (1999) is noted as observing that a notable feature of the A74(M)/M74 DBFO project in Scotland was the liaison of the Scottish Office project staff with their English counterparts, the Highway Agency, for the cross-fertilization of ideas and the tapping of the rich knowledge gained from the latter's experience on their first four pathfinder DBFO road projects. Similar expertise gained by the NHS on their Dartford and Gravesham PFI hospital project is being diffused onto their other numerous PFI projects.

CONCLUDING REMARKS

As stated in the UK Government's Convergence document, the primary responsibility of fiscal policy is to contribute to economic stability through sound public finances by ensuring that current spending is paid for as it occurs and not become a burden on future generations (HM Treasury, 1998). The public private partnership form of procurement by which unitary pricing systems of payments are effected over the life of the project therefore seeks to answer this aspect of the economic policy.

Net investment is forecast to increase from its present level of 0.5% of GDP to 1.1% by 2001-02, as part of the measures designed to address the maintenance backlog within the public sector and improve on the existing infrastructure (HM Treasury, 1998). Much of this investment is expected to come from the private sector by way of public private partnerships. To this end, **Partnerships UK** was set up through which a total £1 billion in equity and debt is to be raised to promote projects through the PPP/PFI approach (Building, 1999). As cited in Chen and Feng (2000), the works of Kormendi and Merquiere (1985), and Levine and Renelt (1992), have demonstrated that investment as a share of GDP has a significant and positive effect on growth.

Knowledge generated as a result of the introduction of the initiative is increasingly having a spillover effect. The Financial Times (2001a) for instance reported that Mr Montague, former head of the projects arm of the PFI taskforce has been hired to play a key role in the privatization of the London Underground. He is also reported to be advising the Dutch Ministry of Finance on the development of that country's PPP. In effect knowledge and expertise in this form of procurement strategy is not only being disseminated locally but is also becoming an export commodity, a requirement

essential for economic growth. The initiative is therefore becoming an investment which is creating and revealing further opportunities, a necessary criterion for growth.

Hopefully the envisaged development of an equity market within the infrastructure industry should pave the way for the inflow of direct foreign investment into the UK economy - a condition recognized by development economists as essential for growth. It has for instance been noted that Japan for example has many rich people with huge amounts of money but very few safe place to invest in (Financial Times 2001b). In theory therefore such surplus savings could flow into the UK infrastructure industry once an investment market is clearly established.

Based on the principle that the PFI/PPP is expected to deliver value for money, the general effect on the macroeconomic climate of the nation should therefore be a positive one. Experience especially in the USA has also shown that public-private partnerships have proved to be productive especially in the health sector and that efficiency gains have been realized in many public sector organizations (Rabin, 1992; Modic, 1989).

One must however not lose sight of the fact that projects procured under PPP/PFI are long term in nature and therefore have the tendency to experience what is termed the 'obsolescing bargain model' where the initial project drivers change with time (Wells, 1999). Classic examples are the cancellation of power project agreements in Pakistan, renegotiations of power and water agreements in India and Argentina respectively, and dispute over toll roads in Bangkok (Wells, 1999; Tam, 1999). In order to keep the innovative motif alive therefore, the packaging of these projects/contracts should be such that slices within them can be revisited periodically for review to keep pace with the ever changing technological advancement necessary for economic growth. As a means of testing whether the objectives are actually being achieved on the ground, projects that have successfully taken off need to be studied in detail to gather empirical evidence against the initial base line situations.

There is also the concern however that by turning capital expenditure into recurrent expenditure, the costs of investments are passed to the future. This could have implications on the government's revenue expenditure in the light of PFI/PPP commitments being entered into by diverse organizations - a situation that might render control and monitoring difficult. A further observation is that in some instances such as the health projects, the PFI approach had delayed investment rather than encouraged it due to the rather long delays encountered during the procurement processes. An additional concern is that since the private sector is motivated essentially by profits, priorities might get distorted with profit making projects taking priority position over projects that might deliver social benefits generally.

Research is currently ongoing to investigate the risks within this form of procurement and provide a framework for managing these risks especially with respect to developing countries so as to promote economic growth.

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