



# The private finance initiative, project form and design innovation The UK's hospitals programme

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## ABSTRACT

This paper discusses the role of public demand, in the form of a government procurement policy, in generating innovative solutions for healthcare infrastructure. It considers the effects of the *project delivery system* (planning, finance, construction and operation) for new hospitals on *design innovation*. It focuses on hospitals built under the UK's private finance initiative (PFI), which was partly introduced to inject increased innovation into hospital delivery. We use case studies of six early PFI hospitals to argue that the introduction of PFI has increased the complexity at the interface between project delivery and hospital operational functions. The result is a project delivery model which yields less innovative outcomes and produces facilities that might not be able to cope with future changes in demand. The paper suggests that new public procurement models do not automatically provide efficiency and innovation benefits.

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## 1. Introduction

Increased interest in the use of 'public demand' to secure innovative solutions and products, and improve the delivery of public services, was recently highlighted by Edler and Georghiou (2007). Drawing on earlier work by Dalpé et al. (1992) which shows how the state often acts as a lead user in stimulating innovation, Edler and Georghiou argue that public procurement is one of a range of measures for delivering innovative public infrastructure and services. The UK is highlighted for its systematic and advanced approach, with the procurement strategies of the National Health Service (NHS) singled out as leading examples of efforts to change practice.

This paper extends the work of Edler and Georghiou by empirically examining the use of the 'private finance initiative' (PFI) to procure and operate new NHS hospitals. This is currently the main procurement route for this type of healthcare infrastructure, and one which govern-

ment has endorsed as a means of stimulating innovation. Specifically, we investigate the relationship between the *project delivery system* (the relationship between the funders, contractors and the public sector client) and *design innovation*. Design innovation is seen here in terms of physical adaptability—the ability of a building to economically accommodate future changing requirements. This has been a long-standing challenge in the provision of healthcare infrastructure, where technologies, policies and services are subject to much shorter lifecycles than that of the relatively inflexible built assets that support them. The need for adaptability was reiterated in 2001 by the then Secretary of State for Health, who argued that innovative new hospital designs could help raise care standards and ensure the flexibility needed to plan for future medical advances (Dept. of Health, 2001).

The study draws on a conceptual framework for exploring project delivery within the rail transport sector developed by Geyer and Davies (2000). Applying this model to the healthcare sector, we argue that in its current form the PFI model is unable to promote the level of innovation in the design of hospital built assets needed to optimise their lifetime clinical efficiency. This is partly due to the

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relationship between (1) the project delivery and (2) hospital operational systems. Through six case studies of new PFI hospital projects, we suggest that instead of promoting a higher degree of integration between the project delivery and hospital operational systems, the introduction of PFI has resulted in a separation between them. This has led to problems such as disrupted communications, complicated patterns of collaboration, misaligned goals and incentives and poor inter-project learning. The result is a project delivery model which may be producing facilities that are unable to adapt to future healthcare needs and health service innovations.

The next section provides a definition of 'adaptability', explains its importance with regard to current hospital developments, and argues that in this context adaptability can be regarded as innovation. We then outline the debate on the use of public demand as an engine for innovation and consider the emergence of PFI as a procurement vehicle for modernising the UK's healthcare infrastructure. The following section describes a conceptual framework for understanding the relationship between PFI as a project delivery mechanism and innovation in hospital design. We also outline three potential reasons why innovation might be hard under PFI, in its current configuration. These relate to the complexity at the interfaces between the various components of the hospital project–operational system, the allocation of risk and rewards within this system, and the impact of PFI on opportunities for intra- and inter-project learning. These questions are then discussed using findings from the six case studies. Finally, we draw conclusions on the policy and practice implications of the empirical findings and the usefulness of the conceptual framework.

## 2. Public procurement, PFI and the modernisation of the UK's healthcare infrastructure

The current interest in demand-side approaches to stimulating innovation, including the use of public demand, dates back to the early 1980s when Rothwell and Zegveld (1981) argued that state procurement could be a more significant trigger than R&D subsidies. As Edler and Georghiou (2007) point out, the use of public procurement for promoting innovation is now well developed in the UK. For example, the Department of Trade and Industry has highlighted the innovation potential of government as an influential and demanding customer (DTI, 2003a,b; cf. CBI & Qinetiq, 2006; Taylor, 2006). At the European Union level, directives on procurement (2004/18/EC and 2004/17/EC) have introduced opportunities for public authorities to specify innovative solutions through functional performance requirements, opening up bids to alternative ideas, and allowing technical and competitive dialogues between purchaser and supplier.

Edler and Georghiou (2007) draw a distinction between two public procurement models. First, strategic procurement policies may be designed to encourage demand for certain technologies, products or services in order to stimulate the market within a particular industrial sector. Second, procurement may be organised to ensure that innovation is an essential criterion in the tendering process. An impor-

tant rationale for such a use of public procurement is the perception that purchasing innovative solutions potentially improves public infrastructure and services in general. In this regard the procurement strategies of the NHS could be seen as a leading example of efforts to change practice.

### 2.1. The PFI hospitals programme

In the late 1990s the UK government embarked on an ambitious agenda of health system reform (NHS, 2000). This included a modernisation programme for its outdated and inappropriate built infrastructure, worth over £40 billion. Introducing the programme, the Secretary of State for Health stated 'We cannot build an NHS for the 21st century with hospitals built in the 19th century. The hospital building programme is a key part of the Government's ten year modernisation programme for the health service' (Dept. of Health, 1998). To stimulate investment, various forms of public–private partnership were introduced, whereby a capital project for a public sector client was procured and often operated by a private sector consortium. The PFI, one of several models of public–private partnership (PPP), is the main funding mechanism for hospitals (Boyle and Harrison, 2000) and has been used for over 90% of all capital schemes in the healthcare sector in England since 1997<sup>1</sup>.

Under the PFI, several private sector partners form a consortium, the 'special purpose vehicle' (SPV), to deliver capital assets and some services to an NHS hospital trust on a long-term contract, generally lasting 30 years or more. In hospital development a PFI arrangement typically involves finance, design, construction, facilities management and sometimes 'soft facilities management' (non-core services such as cleaning and catering), for which fees have to be paid over the duration of the contract. The hospital trust maintains sole responsibility for all clinical services.

For the government the rationale for the introduction of PFI into hospital procurement was threefold. First, it was seen as a way of exploiting the financial strength of the private sector and renewing the healthcare built infrastructure faster than would be the case under conventional public funding models. Second, PFI was felt to be a way of maintaining facilities over the contract lifetime. Huge maintenance backlogs due to underinvestment are frequently the reason for existing facilities needing replacement. Third – and most pertinent for this paper – the government saw PFI as a way of taking advantage of the private sector's 'experience and skills in order to bring innovative solutions to the needs of the health service' (NHS Executive, 1999: 4). This has been a persistent theme in government statements on modernisation of the UK's healthcare infrastructure. It was reiterated by a health minister in 2004, who argued that PFI is

'much more than a new hospital building programme ... It has to become the principal mechanism for getting

<sup>1</sup> PFI and public capital funded projects over £10 million, given the go-ahead since May 1997 (England) updated to 17 October 2006. Available from: <http://www.dh.gov.uk/en/Procurementandproposals/Publicprivatepartnership/Privatefinanceinitiative/index.htm>—accessed 9 June 07.

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