

# Comparative performance of healthcare and transport PFI projects: Empirical study on the influence of key factors

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## Abstract

Private Finance Initiative (PFI) has been used on many projects in the UK in the delivery of public services. Cost, time and risk performance in public projects was anticipated to be improved by the superior skills of the private sector. So far, there are limited empirical studies on the life cycle performance of PFI projects, especially performance comparison between different sectors. This study investigated and compared variations in costs, time, and client requirements tracking it through the strategic business case stage to the operational phase in healthcare and transport sectors. It explored the influence of sector-specific factors, project size and maturity of the PFI on these variations. It used documentary analysis of full business cases of five PFI projects and a questionnaire survey of 44 PFI projects in the UK. The findings reveal that there are still considerable cost and time overruns and requirement changes in PFI projects in both sectors over the development of the project and its early use. The health sector was better than the transport sector for time overruns but was worse on costs. Smaller-value projects outperformed larger projects on cost variations but underperformed on time. © 2013 Elsevier Ltd. APM and IPMA. All rights reserved.

*Keywords:* Private finance initiatives; Variations; Value for money; PFI maturity

## 1. Introduction

In recent years, Public–Private Partnership (PPP) has gained popularity worldwide (Grimsey and Lewis, 2005) as one of the ways to provide the public sector authorities with additional finance to develop new social objectives. It is especially popular in times of economic hardship when public finance is under increasing pressure. PPP comes in many forms, including Private Finance Initiative, concessions and joint ventures (Robinson et al., 2010). The exact form of PPP adopted by a country, its context,

sector and application depends on the country's social, political and economic environments (Grimsey and Lewis, 2005). The main benefit of PPP is that it can assure the procuring authority the best possible performance by sharing risk and innovative skills with the private sector in providing public services in order to achieve greater efficiency and cost effectiveness, while also reducing cost overruns and project delays (Tang et al., 2010).

Several authors have reviewed performance of PPP projects from various perspectives (Clifton and Duffield, 2006; Mahalingam, 2010; Raisebeck et al., 2010; Yang et al., 2010). The key issues investigated include management of risks and finance, structuring an arrangement, performance management and measurement, etc. (Tang et al., 2010). Most of these studies come to the conclusion that PPP performance often falls short of expectation for a variety of reasons, including the lack of experience (Carrillo et al., 2006), lengthy procurement and negotiation periods (Akintoye et al., 2003), the high levels of

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risks involved (Daube et al., 2008) and various country specific barriers (Chen and Doloi, 2008; Mahalingam, 2010).

The UK has used private finance initiative (PFI) to procure projects in various sectors since 1992. By March 2012, there were 717 PFI projects, with an estimated capital outlay of £54.7 billion (HM Treasury, 2012). On average, PFI contributes between 5 and 10% of capital outlay required for public sector infrastructure (Burger and Hawkesworth, 2011). Government agencies have carried out several performance reviews in attempts to ensure lessons from previous projects are used effectively (HT-Treasury, 2003, 2006b, 2008; National Audit Office (NAO), 2003, 2009a). The continuous learning from past projects has significantly improved performance of PFI and made it one of the most interesting cases for learning for developed and developing countries (Cheung and Chan, 2011; Daube et al., 2008; Kleiss and Imura, 2006; Leahy, 2005). Handley-Schachler and Gao (2003) specifically recommend that developing countries wishing to adopt the PPP route should learn from PFI's successes and failures.

By 2009, the National Audit Office (NAO) had published 72 reports evaluating various aspects of value for money (VFM) and the Treasury produced three policy reports. Some examples of the reports, including those published on behalf of these agencies, which have evaluated cost, time and operational performance are as follows:

- Mott MacDonald (2002) reviewed 50 large public procurement projects, including 11 PFI projects. Their review concluded that PFI projects were relatively more certain in time and cost than conventional projects. Most projects were delivered earlier than planned, while cost overruns were as low as 1%.
- HM-Treasury (2003) studied 61 PFI projects. Overall, 88% were delivered on time or early, there were no cost overruns from the public sector side, and operational projects were performing as expected.
- NAO (2003, 2009a) studied construction performance of PFI projects. The 2003 study of 37 projects found 78% of the projects had no construction related cost overruns, while 24% were delivered late. The similar study conducted in 2009 of 114 projects showed that new projects that were implemented between 2003 and 2008 were underperforming. Sixty nine percent of projects were being delivered on time and 65% were delivered to contracted cost versus 78 and 76%, respectively in 2003.
- Partnerships UK (PUK) (2006) studied 105 PFI projects. It found that 80% of all users were always or almost always satisfied with services provided and around 90% of PFI projects were performing satisfactorily or better.
- The Ipsos MORI (2008) surveyed 151 PFI projects and found that 73% of respondents rated the performance good or very good and only 4% rated it poor. The Respondents were happy that user satisfaction was high.

The evaluations have often led to conflicting judgments due to what De Wit (1988) describes as the lack of a clear distinction on what is actually being measured to determine success. For

example, Monbiot (2001) regards the Skye Bridge in UK as a failed PFI because public pressure persuaded the Scottish Executive to nationalize the crossing despite the fact that the bridge was constructed on time and to cost, and it has continued to provide a valuable service to customers. The split is such that, on one hand, proponents credit PFI schemes for the continuous improvement in project completion and modernization of underfunded services such as healthcare, schools, major transport networks and prison services (Akintoye et al., 2003; Carrillo et al., 2008; Raisebeck et al., 2010). While on the other, opponents, such as Pollock et al. (2007), dispute the success on grounds that they only reflect some project phases. Other authors, including Gaffney and Pollock (1999), Shaoul (2005), Pollock et al. (2011) and Hodgkinson (2011) argue that the overall cost to achieve the perceived positive performance is unsustainable.

This study looks at the link between project attributes and performance. Project attributes have been used as one of the decision criteria on the suitability of a project for PPP route (Cheung and Chan, 2011); however, some of them have not been substantiated empirically. It aims to promote evidence-based policy and decision-making, while also sharing lessons from previous projects. Experience from PFI is used in this study to evaluate how different types of project arrangements perform in terms of meeting client requirements, delivery time and cost. It compares the performance of healthcare projects versus transport sector projects; small-value against large-value projects; and recently developed versus long running projects. Findings should strengthen decision-making and inform future policy direction particularly those requiring PPP projects to reach a certain capital thresholds to achieve good VFM.

To avoid aforementioned confusions, the study will assess performance based on the traditional 'iron triangle' (Toor and Ogunlana, 2010) that considers cost, time and quality. De Wit (1988: 168) considers these indicators as essential part of project performance monitoring capable of determining project success if measured by comparing a number of projects. Some studies also agree that variations in any combination of three factors (cost, time and client requirements) imply unpredictability, which can affect the VFM (NAO, 2008; Pollock et al., 2007; Raisebeck et al., 2010).

## 2. The influence of key project attributes

The choice between PFI and other methods of procurement is strictly based on performance and value for money (VFM). Although the concept of VFM is contextual (Daube et al., 2008; Ke et al., 2010; Sobhiyaha et al., 2009), it generally describes the optimum balance between cost and quality to achieve the desired needs (HM-Treasury, 2006a) — which are commonly used in the project management literature. HM Treasury argues that VFM is a comparison of whole life performance based on three indicators: economic, effectiveness and efficiency (HM-Treasury, 2008). Therefore, VFM and performance can arguably be seen as interlinked concepts, only that VFM looks forward while performance looks backwards.

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