

Private Finance Initiative (or Public Private Partnership) Implementation Processes and Perception of Value for Money

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ABSTRACT

The aim of this study is to examine the relationships among perceptions of implementation processes, implementation difficulties and value for money (VFM) in UK school private finance initiative (PFI) or public private partnership (PPP) contracts. The results suggest that implementation factors, such as effective PFI 'consultation', 'contractual', 'monitoring and review' processes have a significantly positive influence on perception of VFM. The results also suggest that difficulties involved in actually implementing PFI processes, such as 'lack of transparency', 'performance measurement difficulties', 'cultural differences' and 'lack of authority' have a significant and negative influence on perception of VFM. These implementation difficulties were also found to be inversely related with perception of the PFI implementation processes but the extent of these relationships varied.

Keywords: Private Finance Initiative, Value For Money, Public Private Partnership, Public Sector, UK

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INTRODUCTION

The private finance initiative (PFI) is increasingly used in the UK to fund major capital investments. It involves a contractual agreement between the public sector and a private sector consortium to design, build, finance and operate an asset over a period of 25 years or more. PFI is a form of public private partnership. The terms PFI and public private partnership (PPP) are used interchangeably – PFI is a specific term used to refer to a contractual agreement with the private sector to provide a service, mostly by designing, building, financing and operating (DBFO) an asset. The term PFI was initially used by the UK Conservative government in 1992 when the policy was officially launched. PPP is a broad term used to refer to all types of partnership arrangements between the public sector and the private sector which includes PFIs.

PFI/PPP contracts have been introduced in the UK and many other countries (including Malaysia, mostly in the road and railway sectors) as part of the global new public management (NPM) movement to deliver high quality public services. NPM, which is premised on implementing private sector's management practices in the public sector, is expected to improve accountability and performance (Hood, 1995). PFIs play a fundamental role in public services globally and provides the opportunity to examine the dynamic nature of their implementation processes (Guthrie, Olson and Humphrey, 1999). PFIs also provide an exemplary case for examining the pervasive use of NPM reforms aimed at 'modernising' the provision of public services by bringing in private sector rationality and expertise in the public sector (Broadbent and Laughlin, 2005).

The government claims that PFI offers value for money (VFM) in the form of high quality and innovative public services (HM Treasury, 2000; 2003a; 2003b; 2004a). VFM is often defined in terms of costs, outputs and outcomes or economy, efficiency and effectiveness. It is a problematic concept primarily because of the difficulties involved in 'measuring' outcomes and the fact that its meanings are rarely made explicit in public policies (Heald, 2003a; 2003b). Treasury guidance on VFM is dominated by the 'public sector comparator' (PSC) which is a hypothetical cost of the conventional procurement option used to benchmark PFI costs, buildings and services (HM Treasury, 2003a). Other guidance containing rules, policies and procedures have been issued to address the PFI consultation,

contractual and management processes to implement PFI and deliver VFM over the term of the contract (HM Treasury, 1999; 2003a; 2004a&b).

Prior studies have examined PFI contracts from various perspectives. For example, some have critically examined the effectiveness of the PFI VFM appraisal and procurement processes (Edwards and Shaoul, 2003) while others have examined the post-implementation monitoring and review processes (Broadbent, Gill and Laughlin, 2003; 2004; 2006). Yet others have examined users' perception of the PFI buildings and services outputs delivered by the private sector service provider (Audit Commission, 2002; Cambridge Economic Policy Associates, 2005).

Although many studies have critically examined the PFI implementation processes and identified a number of implementation difficulties which may hinder VFM, no study has examined the relationships among perception of PFI implementation processes, implementation difficulties and VFM. Hence, the purpose of this study is to explore these complex relationships from the perspective of headteachers of PFI schools. Three related research questions are investigated in this study: (i) whether and if so, how are perceptions of PFI implementation processes related to perceptions of VFM; (ii) whether and if so, how are perceptions of PFI implementation difficulties (that is, lack of transparency, performance measurement difficulties, cultural differences and lack of authority) related to perceptions of VFM?; and, (iii) whether and if so, how are perceptions of PFI implementation difficulties related to PFI implementation processes. To explain these relationships, a theoretical model is developed and tested with empirical data gathered from a survey.

The remainder of this paper is organized as follows: The 'literature review and hypotheses' section clarifies the meaning of VFM and the school PFI implementation processes, presents a theoretical model and a set of hypotheses. Subsequent sections present the research method and a discussion of the results. The final section presents the theoretical contributions, practical implications, limitations and some directions for future research.

LITERATURE REVIEW AND HYPOTHESES

Definition of constructs

Value for money in PFI contracts

VFM has not been defined in the UK government's public policy documents on PFI although the government has largely used the VFM rhetoric to justify the expanding use of PFI contracts (Heald, 2003b). The government argues that PFIs provide VFM in the form of cost-effective public services through innovative and better managed public services than the conventional procurement alternative, without putting the public sector's capital at risk (HM Treasury, 2000). In the context of school PFI contracts, the government posits that the PFI is expected to "provide each school with a single point of contact for the provision of estate services, simplifying the interface with school management, and maximising the time spent by management on education outcomes rather than facilities" (DENI, 2005, p. 7). Audit Offices across the UK have examined the costs, the PFI buildings and services outputs delivered by the private sector service provider and, to some extent, the outcome objectives of PFI contracts, as part of their VFM investigations (Audit Commission, 2002; Audit Scotland, 2002; NIAO, 2004; Cambridge Economic Policy Associates, 2005). By drawing from these PFI studies, this paper examines VFM in terms of perception of costs, outputs and outcomes (Glynn, 1985).

The Audit Commission, which is responsible for VFM audits of school PFI contracts in England and Wales, examined the quality and cost of buildings and services delivered under 17 PFI schemes in 2002 and those of conventional schools (Audit Commission, 2002). It found a significant lapse in the quality of PFI buildings and services and argued that these reflected the need to have better management of the PFI procurement and contractual processes. In the case of the 'successful' PFI schemes, the headteachers were involved in project negotiations from start to finish, and worked very closely with the architects and builders, to ensure that the PFI buildings and services delivered met the schools' needs and expectations. Staff morale and pupils' behaviour were perceived to have improved. Participation and good working relationships among "all stakeholders – school, local education authorities (LEA) and contractor" were key to making the partnership work and to

obtain VFM over the longer term. Overall the 'users' were pleased with their new schools primarily because of the advantages of being in a modern building, compared with the often dilapidated and outdated school it replaced.

The Northern Ireland Audit Office reviewed the first four PFI schools (termed as 'pathfinder schools') in October 2004 (NIAO, 2004). Its main findings were that, although the school PFI deals were economically and financially feasible, the cost of the bids were very close to those of the PSC leading to only marginal VFM benefits of the PFI option to the public sector - the Department of Education in Northern Ireland (DENI) underestimated the cost consequences of procuring PFI - it was procuring multiple PFI projects at the same time which was time consuming, costly and caused delay; the public sector lacked the necessary skills in project management, negotiation and contracting and this resulted in cost escalation; there was limited innovation in both building design and services delivery; there was inadequate coordination of long term enrolment planning across the local education authorities resulting in a significant gap between planned and actual enrolments in 2 of the 4 PFI schools examined; and, post project evaluation (PPE) of the PFI schools by the government department and local education authorities remained to be carried out. The NIAO report (NIAO, 2004) also pointed out that improved buildings and services could have a positive impact on educational attainment through improved staff morale and pupils' behaviour, albeit, there is no research available yet to assess the existence of any effects of the learning environment on the educational outcomes, pupils' behaviour and 'productivity'.

Ismail and Pendlebury (2006) surveyed 214 operational PFI schools to examine the affordability of the PFI, its implementation and the perceptions of users about the quality of the buildings and services delivered. The main findings were that the share of the PFI charge paid by the schools was 10% on average and the staffing costs averaged at 80%. The implication of fixed PFI payments is that it reduces flexibility in terms of budget management by the schools and may adversely affect staffing budgets in times of financial difficulties. The authors also found that the management of the PFI contract is more problematic in 'large' projects than in 'small' projects. In terms of buildings and services outputs, the majority of the respondents felt that the quality of the school buildings was good or very good whereas only half of the respondents felt that the quality of the services was good

or very good. In terms of outcomes, 70% of the respondents agreed that the PFI has improved staff morale whereas only about half of the respondents agreed that the productivity of staff was enhanced and the behaviour of pupils improved.

Based on the preceding studies, VFM in the case of school PFI contracts involves consideration of PFI costs, buildings and services outputs actually delivered by the private sector contractor, and the broader government objectives of enabling headteachers to focus on educational outcomes and improving staff and pupils' morale and productivity.

PFI implementation processes and implementation difficulties

This study focuses on three PFI implementation processes – consultation, contractual and monitoring and review processes – primarily because of their relevance to headteachers. Consultation with PFI users, during the output specification and bidder selection process, is essential to meet users' needs and requirements over the operational phase of the PFI contracts. Consultation process may be defined as the structures, policies and procedures used to obtain the 'active' participation of stakeholder groups affected by a particular policy and seeking their legitimacy (Francis, 1990; Lehman, 2006). In the context of PFI contracts, it involves identifying the needs of headteachers and teachers at the early stages of PFI procurement on the expected outputs and reaching agreement on how these expectations would be met. It would thus include consideration of the feedback of users on the various PFI bids proposed by the private sector to select those which best meets their needs.

The contractual process broadly involves translation of the outputs specified by users into binding legal agreements. This process would include agreement on how good performance would be rewarded and poor performance sanctioned; how changes in service requirements, including termination, would be dealt with; and, how performance would be monitored. The output of this process would be the PFI contract, which is often a complex document containing legally binding terms dictating the level and quality of service; payment mechanism; length of the contract; allocation of risks; mechanisms for dealing with changes in services requirements; PFI service benchmarking and profit sharing mechanisms (Office of Government

and Commerce, 2002). The PFI contract plays a key role in governing the provision of public services over the life of the project. Froud (2003) argues that because VFM is a long-term concept and services requirements constantly change, the contractual terms would always be incomplete. As such, flexibility and trust among the partners are important considerations to make the partnership work and obtain VFM (Tomkins, 2001). There are three main problems associated with PFI contracting - 'adverse selection', 'information asymmetry' and 'moral hazard' (Salanie, 1997; Tomkins, 2001; Froud, 2003). The mechanism designed to reduce adverse selections in PFIs is the bidding process - it reveals the characteristics of the consortiums in terms of the riskiness of their proposals and their capacity to deliver. In the case of PFIs, some of the mechanisms used to foster goal congruence and reduce the problem of moral hazard are the PFI contract, the 'performance monitoring and review processes' and 'payment mechanism'. These are designed to reward PFI contractors for satisfactory performance and penalise them for poor performance.

The Post implementation 'monitoring and review' process of PFI services actually delivered by the service provider enables PFI managers in the public and private sectors to respond to the changing needs and requirements of users over the longer term. HM Treasury guidance advises government departments to put in place relevant PFI monitoring and review mechanisms to safeguard public interest to enable PFI contracts to deliver the VFM benefits foreseen at the procurement stages (HM Treasury, 2003a&b; 2004a&b). In this respect the Office of Government and Commerce (2002) states that the PFI contract should make provision to enable the local authority to monitor the service provider's performance against the outputs specified in the contract. However, although representatives from both the public and private sectors are involved in the service review process, the preparation of performance reports in school PFI contracts are largely within the control of the private sector.

Some studies have identified a number of factors which may adversely affect PFI implementation processes and VFM as a result (Acar and Robertson, 2004; Edwards and Shaoul, 2003; Edwards, Shaoul, Stafford, and Arblaster, 2004). It is often argued that 'lack of transparency' in the PFI processes - for example, due to unavailability and inadequate access to information or reports on the procurement

process, payments made to the private sector, and services actually delivered by the PFI contractor - poses a barrier to the discharge of accountability and the assessment of VFM (Edwards, et al. 2004). Difficulties involved in measuring the quality of services delivered by the private sector (referred to as 'performance measurement difficulties' in this paper) may hinder the implementation of the financial rewards and sanctions in PFI contracts and may adversely affect VFM (Hyndman and Anderson, 1995; Cavalluzzo and Ittner, 2004). Moreover, Acar and Robertson (2004) posit that differences in working practices between the public sector and private sector (referred to as 'cultural differences' in this paper) may lead to conflict and sour working relationships. In the case of school PFI contracts, Edwards and Shaoul (2003) further argue that because PFI contracts are between the private sector and the local education authority, schools lack authority to enforce PFI contracts and this may hinder VFM.

Theoretical model and hypotheses

Figure 1 presents a summary of the theoretical model used to examine the relationships among the PFI implementation processes, implementation difficulties and VFM objectives. Effective consultation, contractual and monitoring and review processes are expected to enable the discharge of accountability and enable VFM objectives to be achieved (See for example, Edwards and Shaoul, 2003; Froud, 2003; Chenhall, 2003). Arguably, these three PFI implementation processes do not operate in isolation but interact with and feed back into each other. For example, in the case of PFIs, the consultation process involves dialogue among interest groups to identify their needs and specify the required outputs, while the contractual process involves translating the outputs specified into binding legal agreements. The PFI contract would contain agreement regarding the services to be delivered and would form the basis for monitoring and review at the post implementation stage. Corrective actions, in cases of deviations from plans, would be undertaken and the changing needs and expectations of users over the life of the contract would be catered for through the monitoring and review process – for example, in cases of requests for new classrooms or termination of the PFI agreement, the LEA and the private sector would revert back to the contract to implement the terms and procedures initially agreed upon.

On the other hand, it is expected that barriers to effective implementation of public policies are likely to have an inverse relationship with perception of implementation processes and VFM (Acar and Robertson, 2004; Cavalluzzo and Ittner, 2004). Edwards, et al. (2004) argue that lack of transparency in PFI processes, such as unavailability or inadequate access to PFI information, is likely to hinder accountability and the assessment of VFM. - Performance measurement difficulties – that is, difficulties involved in measuring the quality of PFI services delivered by the private sector – is expected to obstruct the effective implementation of the financial reward and sanction system in PFI contracts (Froud, 2003). Cultural differences between the public and private sectors and lack of authority by the schools to influence the private sector service provider may sour working relationships and result in schools not receiving VFM from their service providers (Edwards and Shaoul, 2003; Froud, 2003; Shaoul, 2005; Henri, 2006a&b). The

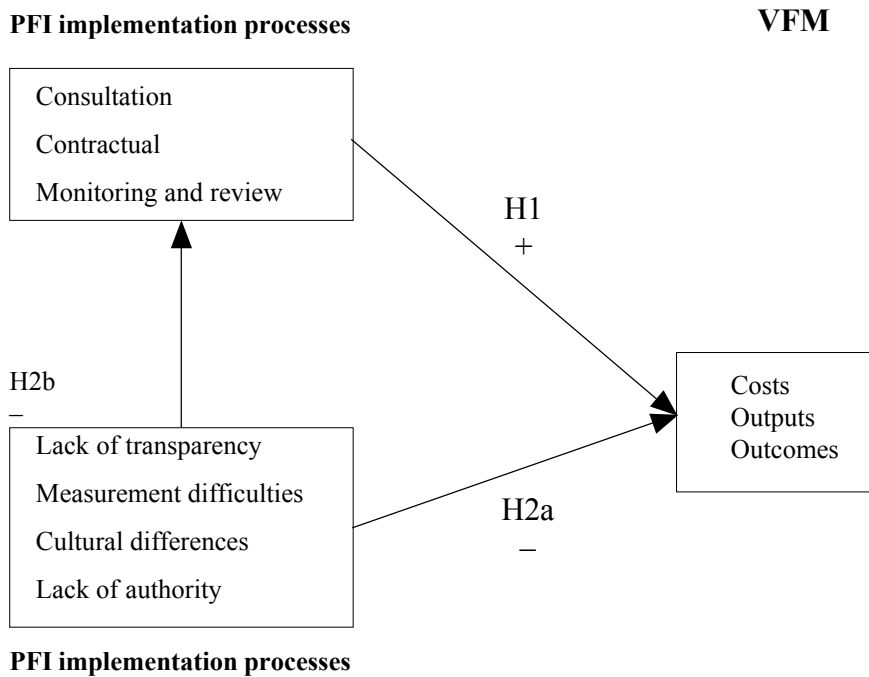


Figure 1 Hypothesized model linking PFI implementation processes, implementation difficulties and VFM

following sub-sections further elaborate on these expected relationships and present the hypotheses.

Relationships between PFI implementation processes and VFM

It is often argued that the ultimate VFM outcome of PFIs depend on how PFI policies and guidance formulated at the macro level are executed at the micro organizational level (Broadbent and Laughlin, 1999; English and Guthrie, 2006). Indeed, the government has issued numerous guides on the consultation (HM Treasury, 1999), contractual (HM Treasury, 2004a), and monitoring and review (HM Treasury, 2003a; 2004b) processes to implement PFIs, but many researchers have questioned their effectiveness and rationale in terms of achieving VFM (Edwards and Shaoul, 2003; Froud, 2003).

Representatives from PFI schools are consulted during the procurement process to enable the LEAs to incorporate the demands and needs of users in the final PFI contract (HM Treasury, 1999). For example, a PFI school headteacher would collate and pass on requests received from teachers to the LEA to prepare an output specification document. The LEA is expected to negotiate with the private sector bidders to obtain the best deal and provide feedback on the prospective bids to the headteachers and teachers before making a final decision. In this respect, effective consultation and contractual processes are expected to have a positive influence on VFM.

However, Edwards and Shaoul (2003) argue that PFIs may not deliver VFM where there are conflicting expectations among stakeholders which are not well managed. Using the Pimlico School PFI as a case study, Edwards and Shaoul (2003) argue that PFI consultation processes were not effective in meeting stakeholders' needs and the PFI contract did not transfer risks to the contractors in the way that was anticipated at the negotiation stage. This ultimately led to the demise of the PFI contract.

Froud (2003) argues that because VFM is a long-term concept and contracts cannot cater for every eventuality, PFI contractual terms agreed to at the procurement stage would always be incomplete. Although PFI contracts contain provisions or clauses to cope with changing requirements of users and sharing of unexpected gains and termination, it locks the estate and reduces its ability to

respond to uncertainty (p. 582). Thus the extent to which the PFI contract adequately reflects both the current needs as well as future needs of the school and how or in whose favour the contract is drawn may have important ramifications on VFM.

PFI contracts include 'monitoring and review' processes to oversee and steer its course over the longer term. This process mainly involves the LEA, the school and private sector service provider reviewing the 'performance reports' produced by the service provider. Tomkins (2001) further states that as the partnership matures, the level of trust increases over time and the information needed to 'control' the relationship decreases. It is expected that headteachers who are satisfied with the services monitoring and review process are more likely to perceive that they are obtaining VFM. However, although most projects include monitoring and review processes at the 'micro' level, many researchers have pointed out that there is a lack of post project evaluation of PFI projects at the respective Departmental levels (e.g. Education, Health and roads) and by Parliamentary bodies such as the National Audit Office and Public Accounts Committee (Broadbent, Gill and Laughlin, 2003). Broadbent, Gill and Laughlin (2006) found that post project evaluation of PFI contracts was mostly geared towards monitoring of services delivered through facilities management systems while other qualitative factors and risk transfer were not systematically evaluated.

Taken together, the need for better consultation, contractual and monitoring and review processes to improve VFM suggests the following hypothesis:

Hypothesis 1. Perception of PFI implementation processes is positively related to perception of VFM.

PFI implementation difficulties and VFM

Many researchers have highlighted that certain factors, such as lack of transparency, performance measurement difficulties, cultural differences between the public and private sector and lack of authority may adversely affect VFM objectives. For example, Heald (2003a) argues that, although transparency is essential for promoting public accountability in government spending, transparency is positively associated with 'effectiveness' only up to a certain optimal level. Hood and Heald (2006) further state that while the benefits associated with increasing transparency

may outweigh its costs, there may be a trade off between its 'quantity' and 'quality'. Similarly, in the case of PFI in roads and hospitals, Edwards, Shaoul, Stafford, Arblaster (2004) stated that the difficulties experienced by their research team in obtaining PFI information "do not generate much hope that patients, road users, taxpayers and other citizens can see how society's resources are being used" and that "there is little information about the impact of PFI contracts on the performance of the procurer, and there is a build-up of commitments and implicit guarantees within very long-term contracts about which there is little transparency" (See also, Cavalluzzo and Ittner (2004, pp. 260-261) who found that lack of transparency and decision making authority were significantly and negatively associated with the extent to which managers are held accountable for performance in the US public sector).

Edwards and Shaoul (2003) examined how the control procedures designed to ensure VFM 'failed' in the context of a PFI school in the UK. They argued that the conflicting interests of the LEA and the school generated difficulties in terms of meeting the identified needs of the school. This problem arose primarily because the PFI contract is between the private sector and the LEA and not the school which had limited input and lacked authority in the PFI decision making processes. Although schools monitor and manage their respective PFI contracts, it is the LEA that needs to enforce them. However, if the LEA fails to enforce the performance standards initially agreed upon, then the school has little redress and pupils and teachers would suffer as a result. The authors further argue that there is tension between "promoting the use of PFI and ensuring that it is only used in ways that meet the objectives of greater efficiency and VFM" so that it does not 'drive' the procurement processes because of the general perception that the government would only make money available for PFI as opposed to conventional procurement (See also, Ismail and Pendlebury, 2006 who made similar observations).

In the case of school public-private partnership contracts in the US, Acar and Robertson (2004) explained that participants in public-private partnerships face the challenge of influencing the behaviour and performance of individuals coming from different organizations without having the requisite formal authority to do so. They argue that although participants may face pressure from formal organisational and PPP specific structures, they nonetheless develop and adhere to

'soft' systems as alternative means to achieve the desired VFM/performance objectives. Further difficulties associated with implementing PPP policies in schools and achieving VFM were found to stem from the availability of and access to information, measurability constraints arising from the very nature of many partnership programs and activities, personal differences and frequent changes in personnel.

From the preceding analysis of some of the difficulties faced when implementing PFIs and their adverse influence on VFM, the following two hypotheses ensue:

Hypothesis 2a. Perception of PFI implementation difficulties (that is, lack of transparency, performance measurement difficulties, cultural differences between the public and private sector, and lack of authority by the school) are negatively related to perception of VFM.

Hypothesis 2b. Perception of PFI implementation difficulties are negatively related to perception of PFI implementation processes

Research method

Sample and data collection

In order to test the hypotheses, data were collected through the use of a structured questionnaires which were sent to headteachers of 332 operational PFI schools in the UK. A database of PFI schools was developed by contacting the relevant local education authorities and the departments of education in England, Wales, Scotland and Northern Ireland.

An initial questionnaire was developed based on a review of relevant literature. This was sent to fellow academics for their comments. It was revised and pilot tested, in May 2005, on six PFI schools (two located in England, two located in Scotland, one located in Wales and another based in Northern Ireland). The questionnaire was further revised based on the feedback received and finally administered between October 2005 and January 2006. School headteachers who did not respond to the initial mailings were sent a follow-up questionnaire towards

the end of November 2005. Follow up telephone calls were made to non-respondents in January 2006 to increase the response rate.

143 usable responses were received from the 332 UK PFI schools surveyed (162 replies in total were received - 16 respondents replied but refused to take part in the survey and 3 questionnaires were unusable; the usable response rate was thus 43%). Final sample sizes for some of the variables used in the analysis were less than 143 due to the common problem of missing data. Early and late respondents were compared to detect any differences in the mean score of each variable. A comparison of the means of the variables showed no significant differences between early and late respondents.

Measurement and validation of constructs

Most measures were drawn from literature and existing survey instruments (Audit Commission, 2002; Audit Scotland, 2002; Acar and Robertson, 2004; Cavalluzzo and Ittner, 2004; Ismail and Pendlebury, 2006). The survey instrument is similar to that used by Cavalluzzo and Ittner (2004) whereby respondents' 'agreement' with the statements made were assessed on a five point Likert Scale (Scale 1= no extent, 2=small extent, 3=moderate extent, 4=great extent, 5=very great extent). This instrument was used because of the similarity of the theoretical models and statistical analyses employed.

Multiple questions were used to examine each construct of implementation processes, implementation difficulties and VFM. Confirmatory factor analysis was used to: reduce the multi-dimensionality of the questions, minimize measurement error, and, establish convergent validity. All the variables loaded better than 0.50 on the respective factors. Construct reliability was assessed using Cronbach coefficient alphas. All the Cronbach Alpha coefficients exceeded the recommended cut-off level of 0.70 (Nunnally, 1978). Specific questions, descriptive statistics, reliability and factor analyses for the survey items used are shown in Table 1.

In general, except for the negotiation of the unitary payments where they did not have much influence, headteachers seem to be satisfied with the PFI consultation process (mean>3). However, the PFI contract was not perceived favourably (mean<3), especially in terms of its ability to deal with future changes in service

Table 1 Descriptive statistics, reliability and confirmatory factor analyses for the survey items

Construct and survey items	N	Mean	Std. dev.	Factor loading
PFI IMPLEMENTATION PROCESSES				
To what extent do you AGREE with the following statements? ^a				
Consultation process (coefficient alpha = 0.910)				
Our school's requests were considered during the consultation process	140	3.33	1.153	0.917
The consultation process with the local education authority was effective, in terms of channelling our views and needs	140	3.13	1.187	0.929
The share of our school's PFI unitary payments was based on free negotiation, with the Department of Education and Local Education Authority	123	2.54	1.189	0.779
Our school was satisfied with the final bidder selection process	134	3.29	1.231	0.751
Our school's requests were incorporated in the PFI contract	140	3.08	1.138	0.925
Contractual process (coefficient alpha = 0.906)				
The PFI contract adequately reflects the current needs of our school	142	2.94	1.162	0.901
The PFI contract adequately reflects the future needs of our school	141	2.44	1.155	0.922
Our school's PFI contract is flexible enough to cover future changes in service requirements	141	2.26	1.078	0.870
Adequate legal clauses are present in the PFI contract to protect the interests of our school	133	2.86	1.219	0.842
Monitoring and review process (coefficient alpha = 0.915)				
The service review meetings with the service provider are useful	141	3.30	1.095	0.859
Our school has a good working relationship with the service provider	143	3.35	1.127	0.888
Our school is happy with the service review process	143	2.98	1.190	0.892
The service review reports I receive from the facilities manager are useful for assessing the quality of services delivered	142	2.68	1.108	0.858
The service review reports I receive from the facilities manager accurately represent the actions of the service provider, in terms of responding to complaints and requests for service improvement	142	2.84	1.140	0.824

Construct and survey items	N	Mean	Std. dev.	Factor loading
To what extent did the following PFI IMPLEMENTATION CHALLENGES or DIFFICULTIES hinder PFI implementation processes in your PFI school?				
a. Lack of transparency (coefficient alpha = 0.893)				
Availability of information or reports on the services delivered by the PFI contractor or service provider	142	2.86	1.115	0.944
Access to information or reports on the services delivered by the PFI service provider	142	2.86	1.089	0.955
Understandability of the reports provided by the PFI service provider	142	2.82	1.087	0.822
b. Performance measurement difficulties (coefficient alpha = 0.872)				
Difficulty in assessing the quality of the services delivered by the PFI service provider	143	3.04	1.138	0.754
Difficulty in assessing the impact of PFI programmes on our staff	143	2.80	1.235	0.929
Difficulty in assessing the impact of PFI programmes on our pupils	143	2.70	1.234	0.905
Monetary constraints in terms of having adequate financial resources to gather and analyse PFI information	142	3.11	1.270	0.807
c. Cultural differences (coefficient alpha =0.816)				
Differences in working practices (or culture) between our school and the private sector service provider	143	3.62	1.216	0.864
Differences in personality between our school personnel and the PFI service provider	143	3.02	1.361	0.891
Frequent changes in the PFI service provider	143	3.45	1.378	0.814
d. Lack of authority (coefficient alpha =0.788)				
Inadequate authority within our school to influence the PFI service provider or the local education authority	143	2.97	1.399	0.909
Inadequate top management support from the Local Education Authority to our school	143	2.76	1.323	0.909

Construct and survey items	N	Mean	Std. dev.	Factor loading
VFM				
To what extent do you AGREE with the following statements?				
Costs (coefficient alpha = 0.751)				
Our school is happy with the services provided by the service provider, in return for its share of the unitary payments paid	141	2.58	1.015	0.901
We are satisfied with our new school building, given the unitary payments paid to the service provider	140	3.31	1.024	0.828
Penalties, such as reduction in payments, provide incentives to the service provider to deliver the level of services agreed in the PFI contract	139	2.73	1.260	0.745
Outputs (coefficient alpha = 0.904)				
We are satisfied with the design of the building	141	3.24	1.212	0.820
We are satisfied with the quality of the interior decorations of the building	142	3.06	1.159	0.856
We are satisfied with the quality of the exterior finishes of the building	142	3.32	1.120	0.787
We are satisfied with the use of natural daylight	142	3.27	1.166	0.806
We are satisfied with the acoustics of the rooms	142	2.99	1.194	0.716
The private sector is innovative in terms of the building design of our school	141	2.55	1.279	0.768
The private sector service provider is innovative in terms of services delivery	142	2.23	1.043	0.702
We are satisfied with the overall maintenance services of the school building	142	2.92	1.108	0.734
Outcomes (coefficient alpha = 0.945)				
The PFI building and services are having a favourable impact on staff morale	142	3.39	1.179	0.922
The PFI building and services are having a favourable impact on staff productivity	142	3.17	1.185	0.935
The PFI building and services are having a favourable impact on pupils' productivity	142	3.35	1.149	0.945
The PFI building and services are having a favourable impact on pupils' behaviour	141	3.15	1.207	0.901
PFI are helping to provide school buildings and services which are conducive to learning	143	3.34	1.133	0.824

a Scale: 1=no extent, 2=small extent, 3=moderate extent, 4=great extent, 5=very great extent (Based on Cavalluzzo and Itmer (2004))

requirements (mean=2.26) and its reflection of the future needs of the school (mean=2.44). Although the headteachers perceived the service review meetings with the service provider to be very useful (mean=3.30), the usefulness of the service review reports prepared by the facilities manager as well as the accuracy of the reports were perceived less favourably (mean=2.68 and 2.84 respectively).

'Cultural differences' between the school and the PFI service provider was perceived to be one of the most important difficulties faced when implementing PFI processes (mean>3). This was followed by performance measurement difficulties in PFI programmes, lack of authority and lack of transparency in the PFI processes respectively.

Headteachers perceived that they received more value from payments made with regards to the PFI buildings (mean=3.31) than for the services (mean=2.58) and in general, agreed to a small and moderate extent that penalties in PFI contracts do incentivise good performance or penalise poor performance (mean=2.73). As regards the buildings and services delivered, headteachers were generally more satisfied with the PFI buildings (mean>2.99) than with the services (mean<3) and agreed only to a small extent that the private sector was innovative in the provision of PFI services (mean=2.23). However, headteachers seem satisfied that the PFI is having a favourable impact on: staff morale (mean=3.39), staff productivity (mean=3.17), pupils' productivity (mean=3.35) and pupils' behaviour (mean=3.15). The PFI is also perceived to help provide schools which are conducive to learning (mean=3.34).

CORRELATION

Table 2 shows the correlation matrices among the variables used in this study. Most of the associations are significant at the 1% level (two-tailed). Despite the significant correlations, all Variance Inflation Factor (VIF) scores (not reported) were below 2.5, indicating no serious problems with multi-collinearity in subsequent regression models. Tabachnick and Fidell (2001, p. 84) further advise researchers to "think carefully before including two variables with a bivariate correlations coefficient of 0.7 or more in the same analysis". With the exception of OUTPUTS and OUTCOMES, all the correlation coefficients were less than 0.7 further

Table 2 Pearson's correlation matrices of PFI implementation processes, implementation difficulties and VFM

	1	2	3	4	5	6	7	8	9	10
1. CONSULTATION PROCESS	1.000									
2. CONTRACTUAL PROCESS	0.726*	1.000								
3. MONITORING AND REVIEW PROCESS	0.473*	0.584*	1.000							
4. LACK OF TRANSPARENCY	-0.382*	-0.504*	-0.548*	1.000						
5. MEASUREMENT DIFFICULTIES	-0.370*	-0.479*	-0.481*	0.665*	1.000					
6. CULTURAL DIFFERENCES	-0.411*	-0.561*	-0.579*	0.593*	0.655*	1.000				
7. LACK OF AUTHORITY	-0.574*	-0.627*	-0.585*	0.528*	0.458*	0.596*	1.000			
8. COSTS	0.526*	0.675*	0.628*	-0.511*	-0.533*	-0.549*	-0.609*	1.000		
9. OUTPUTS	0.626*	0.696*	0.602*	-0.521*	-0.475*	-0.593*	-0.544*	0.695*	1.000	
10. OUTCOMES	0.550*	0.608*	0.510*	-0.370*	-0.375*	-0.480*	-0.512*	0.616*	0.791*	1.000

* indicate significant at the 0.01 level (two-tailed).

confirming that there was no serious multi-collinearity problem. Therefore, all variables were retained in the regression models.

Perhaps the most important and contentious question relevant to PFIs is whether, as emphasised in government publications, PFI implementation processes and VFM objectives are indeed related. Consistent with these claims and literature (see for example, Acar, 2004; Cavalluzzo and Ittner, 2004), PFI implementation processes are positively associated with VFM while PFI implementation difficulties are negatively associated with VFM. Moreover, perceptions of PFI implementation processes and implementation difficulties are negatively associated.

RESULTS

The hypotheses are now tested by examining the relationships between: (1) perception of PFI implementation processes and perception of VFM (hypothesis 1); (2) perception of PFI implementation difficulties and VFM (hypothesis 2a); and, (3) perception of PFI implementation processes and perception of PFI implementation difficulties (hypothesis 2b).

H1: PFI implementation processes and VFM

The influence of perceptions of PFI implementation processes on VFM is first examined. As Pizzini (2006) notes, the key to evaluating the effectiveness of government policies is to assess the extent to which the institutionalised systems actually enable the delivery of policy objectives.

Table 3 displays the results of the relationship between perceptions of the effectiveness of PFI implementation processes and VFM. The regression equations are highly significant, with an adjusted R^2 of 52.5%, 55.3% and 41.1% respectively.

Consistent with hypothesis H1, the results show that VFM constructs are significantly and positively influenced by perceptions of CONSULTATION, CONTRACTUAL and MONITORING AND REVIEW processes. These results provide further empirical support to previous PFI studies (for example, Edward and Shaoul 2003; Froud 2003) on the importance of effective PFI implementation processes to meet and respond to the changing needs and expectations of users.

Table 3 Relationships between PFI implementation processes and VFM

	Hypothesized sign	COSTS	OUTPUTS	OUTCOMES
Intercept		0.746* (3.812)	0.709* (3.757)	1.047* (4.196)
1. CONSULTATION PROCESS	+	0.039 (0.519)	0.200* (2.754)	0.216** (2.242)
2. CONTRACTUAL PROCESS	+	0.387* (4.668)	0.322* (4.040)	0.326* (3.090)
3. MONITORING AND REVIEW PROCESS	+	0.327* (4.837)	0.261* (3.950)	0.242* (2.826)
Adjusted R ²		0.525	0.553	0.411
F-statistic		52.119*	58.343*	33.630*
Sample size		139	139	140

Ordinary least squares coefficients, with corresponding t-statistics in parentheses.

* indicate significant at the 0.01 level (two-tailed).

** indicate significant at the 0.05 level (two-tailed).

Only, CONSULTATION PROCESS did not seem to have a significant influence on perception of COSTS. This may possibly be because headteachers perceive that they have limited control over the determination of the unitary payments during the consultation process and over the administration of financial penalties after the PFI contract is implemented.

H2a: PFI implementation difficulties and VFM

The influence of the perception of PFI implementation difficulties on perception of VFM is now examined. Table 4 shows that the resulting regression models are highly significant, with an adjusted R² of 45.4%, 41.3% and 29.0% respectively. Consistent with Hypothesis H2a, all measures of PFI implementation difficulties are negatively associated with perceptions of VFM. However, the extent of these inverse relationships varies.

This study finds mixed evidence that perception of LACK OF TRANSPARENCY in PFI is related to VFM. LACK OF TRANSPARENCY is negatively and significantly associated with perceptions of OUTPUTS, suggesting

Table 4 Relationships between PFI implementation difficulties and VFM

	Hypothesized sign	COSTS	OUTPUTS	OUTCOMES
Intercept		4.752* (24.177)	4.814* (23.731)	5.008* (19.170)
1. LACK OF TRANSPARENCY	-	-0.094 (-1.166)	-0.175** (-2.087)	-0.033 (-0.306)
2. MEASUREMENT DIFFICULTIES	-	-0.168** (-2.093)	-0.012 (-0.142)	-0.038 (-0.351)
3. CULTURAL DIFFERENCES	-	-0.081 (-1.099)	-0.238* (-3.112)	-0.200** (-2.031)
4. LACK OF AUTHORITY	-	-0.305* (-5.200)	-0.191* (-3.159)	-0.301* (-3.862)
Adjusted R ²		0.454	0.413	0.290
F-statistic		30.128*	25.672*	15.406*
Sample size		140	140	140

Ordinary least squares coefficients, with corresponding t-statistics in parentheses.

* indicate significant at the 0.01 level (two-tailed).

** indicate significant at the 0.05 level (two-tailed).

that unavailability of information on the performance of the service providers negatively influences assessment of the buildings and services outputs delivered. However, LACK OF TRANSPARENCY is unrelated to perceptions of COSTS and OUTCOMES.

MEASUREMENT DIFFICULTIES are negatively and significantly associated with perceptions of COSTS but not with perceptions of OUTPUTS and OUTCOMES. The significant negative association between MEASUREMENT DIFFICULTIES and perceptions of COSTS imply that unitary payments based penalties and rewards systems are not perceived favourably in cases where there are significant difficulties associated with measuring the performance of the contractors. CULTURAL DIFFERENCES are negatively and significantly related to perceptions of OUTPUTS and OUTCOMES but not COSTS. On the other hand, LACK OF AUTHORITY is significantly and inversely related to all the constructs of VFM suggesting that schools that have greater power in the PFI processes are more likely to perceive that they are obtaining VFM from the PFI buildings and services actually delivered.

Although the results show that many of the implementation difficulties constructs have a negative influence on perception of VFM, these results only provide partial support to hypothesis H2a.

H2b: PFI implementation difficulties and PFI implementation processes

Table 5 shows the results of the influence of PFI implementation difficulties on PFI consultation, contractual and monitoring and review processes. Due to missing responses for some of the variables, the sample size ranged from 139 to 141. The resulting regressions are highly significant, with an adjusted R² of 33.7%, 45.4% and 44.1% respectively.

In the case of the influence of PFI implementation difficulties in the CONSULTATION and CONTRACTUAL process, only LACK OF AUTHORITY was significant. Consistent with Edwards and Shaoul (2003), the perceived lack of authority by the schools to influence PFI consultation processes at the procurement stage of PFI contract is relatively higher.

With the exception of the MEASUREMENT DIFFICULTIES construct, LACK OF TRANSPARENCY, CULTURAL DIFFERENCES and LACK OF AUTHORITY seem to be significant barriers in the MONITORING AND REVIEW PROCESS. These results may be explained by the fact that only at the post PFI implementation stages do headteachers play a more active role in the management of their respective PFI schools and perceive the lack of transparency by the private sector, cultural differences between the schools and the private sector and the lack of authority of the schools to be more prevalent.

One result that differs from hypothesis H2b is the insignificant relationship between MEASUREMENT DIFFICULTIES (that is, the difficulties of assessing the quality of services and the impact of PFI programmes and, lack of financial resources to gather and analyse PFI information) and all the three PFI implementation processes. Thus, contrary to hypothesis H2b, MEASUREMENT DIFFICULTIES do not appear to significantly affect PFI implementation processes. Cavaluzzo and Ittner (2004, p. 260) also found that “difficulties selecting and interpreting appropriate performance metrics (METRIC DIFFICULTIES) have no direct effect on accountability” processes in US governmental organisations.

Table 5 Relationships between PFI implementation difficulties and PFI implementation processes

	Hypothesized sign	CONSULTATION PROCESS	CONTRACTUAL PROCESS	MONITORING AND REVIEW PROCESS
Intercept		4.686* (18.705)	4.698* (21.225)	5.130* (23.692)
1. LACK OF TRANSPARENCY	-	-0.056 (-0.536)	-0.132 (-1.451)	-0.222* (-2.486)
2. MEASUREMENT DIFFICULTIES	-	-0.078 (-0.758)	-0.063 (-0.698)	-0.026 (-0.289)
3. CULTURAL DIFFERENCES	-	-0.016 (-0.174)	-0.153 (-1.840)	-0.205* (-2.510)
4. LACK OF AUTHORITY	-	-0.415* (-5.563)	-0.356* (-5.403)	-0.249* (-3.846)
Adjusted R ²		0.337	0.454	0.441
F-statistic		15.132*	30.064*	28.757*
Sample size		139	140	141

Ordinary least squares coefficients, with corresponding t-statistics in parentheses.
* indicate significant at the 0.01 level (two-tailed).

Overall, the preceding findings are consistent with prior studies exploring factors which perversely influence the implementation of public policies in general and PFI in particular. These results suggest that, the problems and challenges of making PFI post implementation processes more transparent, the differences in ethos and working practices between the public and private sector and the power differentials in the PFI processes need to be addressed if they are to be made and perceived as more effective.

CONCLUSION

The objective of this study was to examine the relationships among perception of the PFI implementation processes, implementation difficulties and VFM.

Overall the results suggest a significantly positive relationship between perception of most of the PFI implementation processes and perception of VFM (H1) – headteachers who perceive the PFI implementation processes as effective are more likely to perceive that they are obtaining VFM at the post implementation stage. This finding highlights the importance of effective PFI consultation, contractual and monitoring and review processes to achieve VFM in UK school PFI contracts. However, the results on the influence of PFI implementation difficulties and VFM were mixed while those on the influence of PFI implementation difficulties on PFI consultation and contractual processes were weak. Nevertheless, these results imply that barriers to the effective implementation of PFI policies should be identified and removed. In particular, ‘active’ participation of users, effective contractual processes and monitoring and review mechanisms are some of the issues that need to be given due consideration by the government, if PFIs are to deliver the promised VFM over the longer term.

Previous studies have highlighted the problematic nature of certain aspects of the PFI consultation, contractual and monitoring and review processes but have not examined their overall influences on VFM. This study contributes to PFI literature by developing an exploratory model to link PFI implementation processes with VFM and testing it. Second, this study is expected to provide better understanding of the relationships between PFI implementation processes, PFI implementation difficulties and VFM in the context of school PFI contracts in the UK. This paper explored these relationships by examining three types of

implementation processes relevant to PFI users and four factors hindering their effectiveness and has further opened the debate concerning the role of PFI implementation processes in improving VFM.

Similar to other empirical studies, this study has potential limitations and the findings should be interpreted with caution. First, only the PFI implementation processes relevant to headteachers were examined. However, there may be other factors influencing VFM which have not been considered. Second, perception of implementation processes and VFM is subjective and has been measured using a subjective instrument which only reflects certain dimensions relevant to school PFI contracts. There is thus potential for bias. Third, the scope of this research is limited to examining the views of headteachers of PFI schools. The views of other stakeholders such as teachers and pupils were not sought. – Finally, the findings of this study are only applicable to UK school PFI contracts and should ideally not be generalised.

Being exploratory in nature, this study has opened some avenues for future research as follows. This study may be replicated across other types of PFI contracts (for example, PFI contracts in hospitals) to examine the extent to which the hypothesised relationships between implementation processes, implementation difficulties and VFM are relevant in other contexts and in other countries. Future research could investigate, through discourse with the relevant stakeholders involved in PFI contracts, the effectiveness of the consultation, contractual and monitoring and review processes, factors hindering their effectiveness and their implications for VFM – there are opportunities for further research to examine the implementation and evaluation of PPP contracts across the globe, including Malaysia. Moreover, there is also the opportunity to examine perceptions of implementation processes and VFM in conventional public sector procurement projects and to contrast them with PFI projects.

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