

**MANAGING ACROSS MULTIPLE BOUNDARIES:
PRELIMINARY FINDINGS FROM AN EXPLORATORY STUDY
OF PFI PROCUREMENT PROCESSES**

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ABSTRACT. Successive UK governments have increasingly used Private Finance Initiative (PFI) and Public-Private Partnership (PPP) investment vehicles as the principal method for procuring public sector capital projects and delivering associated services. To date there has been limited in-depth empirical investigations into managerial processes associated with PFI. This paper explores how arrangements across multiple boundaries (private and public sector, product and service provisions and extended supply network life-cycle) profoundly challenge extant models for inter-organisational relationships and governance structures. This paper reports preliminary findings from an exploratory case study of a British PFI hospital highlighting two specific issues: governance structures and impact of time. The paper concludes by highlighting a number of key research agendas related to managing supply across multiple boundaries.

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INTRODUCTION

Faced with increased pressure to be both more effective and efficient (Bouckaert and Halachmi, 1995) many governments have turned to the perceived magic formula of private sector involvement in the financing, development and provision of public services (Pietroforte and Miller, 2002). In the UK, for instance, the Private Finance Initiative, first deployed in 1992 by the Conservative administration, has come to dominate the procurement of capital projects and provision of many associated services (Broadbent and Laughlin, 2005; Froud, 2003). By March 2006, the PFI contracts for construction of schools, prisons, bridges, hospitals, roads and military equipments accounted for a capital value of £47.6 billion (H.M. Treasury, 2006). The health sector accounts for a significant proportion of the total UK PFI population. To date the Department of Health has signed off 149 projects, with a sum capital value of £6.5 billion (H.M. Treasury, 2006). The stated aim of PFI is to secure better value for money (i.e. 'quality' services at 'optimal' cost; and 'optimal' risk allocation for both contracting parties) by promoting increased contestability and diversity of provision. PFI within the UK have been defined as mechanisms for *'purchas[ing] quality services on a long-term basis so as to take advantage of private sector management skills incentivised by having private finance at risk'* (Stationery Office, 2000; Grant and Dutton, 2001). Leaving aside specific ideological concerns, such as whether the policy is legitimate, cost-effective, actually results in risk transfer or is sufficiently accountable (Froud, 2003), this paper argues that PFI is clearly an innovative public management practice. Yet although the controversial nature of the policy has attracted much comment from practitioners and academics, there has been much less in-depth empirical investigation (Fischbacher and Beaumont, 2003). This corresponding failure to engage with the detailed mechanics of the policy, albeit noting that the policy has evolved substantially over the last decade, has meant that many of the more managerial problems associated with PFI remain relatively under-researched. This paper reports the earliest stages of a three-years project investigating how public *and* private organisations experience, and seek to influence, the complex long-term supplier relationships that comprise a typical PFI procurement and provision network. The paper links preliminary empirical findings from a 'first wave' NHS hospital case with the extant PFI/PPP literature. Two specific issues are explored: governance structures (including contracts, performance management and incentive mechanisms) and the

impact of time (especially in the context of long-term relationships). The paper concludes by highlighting a number of themes that constitute an emerging research agenda.

CONCEPTUAL BACKGROUND

This section reviews the existing supply management, procurement and public management literature. The majority of this work is focused on risk management or financial evaluation issues from a public sector management perspective (Froud and Shaoul, 2001; Froud, 2003; Ball *et al.*, 2003). Much less attention has been given to the understanding of practical supply governance issues. Despite these limitations, important lessons can be derived under the twin thematic headings of governance structures and the impact of time outlined in the section above.

Governance structures

Many political, social, ideological and legal factors influence the specific choice of governance structures in the context of public-private procurement arrangements (Essig and Batran, 2006). Adopting Williamson's seminal (1985) work - alternative governance mechanisms, ranging from market to hierarchy (vertical integration), are determined by the extent of bounded rationality, opportunism, asset specificity and switching costs - Essig and Batran (2006) proposed public-private structures as a hybrid form between market and hierarchy. Although they argue that the strategic importance and specificity of individual goods and services influences the particular choice of institutional or contractual arrangements, there is limited empirical evidence relating to the appropriate conditions for different types of supplier relationships. It is clear that under certain situations, drafting a complex contract could be very costly and ineffective due to asymmetric information and, hence, may lead to potential inefficiencies in a relationship (Baiman and Rajan, 2002). Similarly, Froud (2003) revealed the problems with using PFI contracting for risk management, were due to problems with incompleteness in writing contracts. Further additional problems are associated with contracting for a combined product and service package. These include PFI contracts tend to involve both the bundling of the design, building, finance and operation of the project within single contract and for a long period of time; this arrangement tends to increase both asset specificity and uncertainty (Lonsdale, 2005b; Bennett and Iossa, 2006). Hart (2003) argued that contracting for such systems requires the quality of services to be well specified, or the availability of

good performance measures that reward or penalise the service providers.

With respect to alternative governance mechanisms, the dominant supply chain management logic promotes a 'relational' approach as distinct from the 'impersonal, discrete and short-term' transaction-based market approach. The relational approach emphasises the role of developing trust in supply relationships thereby achieving a mutually successful outcome. The IMP network model (Håkansson and Snehota, 1995) for example suggests that organisations are inter-dependent - with relationships developed when two companies build up activity links, resource ties, and actor bonds. Hence coordination is achieved by managing these inter-dependent activities. It is also suggested that different approaches also have implications for specific co-ordination mechanisms, with the relational approach more likely to be self-enforcing and the transactional approach often requiring additional enforcement and active monitoring. With specific reference to PFI, it has been argued that the sheer multiplicity of stakeholders, with their various and often conflicting perceptions, interests and strategies (Klijn and Teisman, 2003), necessitates the active consideration of relationships as co-ordinating mechanisms for intra- and inter-organisational networks (Tranfield *et al.*, 2005, Koppenjan, 2005). Conversely, research has highlighted the additional difficulties inter-dependent relationships between private and public sector organisations could face (e.g. Lonsdale, 2005a&b, Erridge, 2002). Teisman and Klijn (2004) argued that commercial contract negotiations between the private and public sector may be influenced by their different values and strategies: public actors have driven by politics and an emphasis on formal transparency in delivering public value; private actors driven by financial value creation. These difficulties also partly reflect an imbalance of power (Grimshaw *et al.*, 2002) – although interestingly different authors have interpreted this in different ways with some arguing that the public sector has a subordinate role in the relationship (Whorley, 2001), whilst others present such relationships as problematic for a buyer organisation due to post-contractual lock-in to suppliers (Lonsdale, 2005b). For example, in relationships where asset specificity and switching costs are significant, the buyer organisations are likely to become locked-in to its suppliers (i.e. buyers are constrained to exit a relationship and become dependent on suppliers). However, the dynamic nature of political decision-making (Lonsdale, 2005b) also contribute to these developments. For instance,

going for the PFI procurement method tends to be more influenced by political factor than economic rationality when the decision is based on 'PFI or nothing' option (Lonsdale, 2005b). Correspondingly, empirical studies have revealed many PFI/PPP projects to be traditional/non-collaborative relationships (Klijn and Teisman, 2003) and that trust is difficult to establish in public private partnerships (Teicher et al, 2006). Also, it is suggested that this lack of inter-dependence has adverse implications for the process of risk transfer in PFI (Ball *et al*, 2003 and Lonsdale, 2005a).

Performance management and incentive mechanisms

The previous section on governance has already highlighted that there are problems with asymmetric information and the uncertainties associated with PFI contracts and that the different values and strategies of private and public sector organisations can lead to divergent objectives within a PFI project. Thus, appropriate incentive mechanisms are crucial to steer public and private parties' behaviour in inter-organisational relationships across multiple boundaries (private and public sector, product and service provisions and extended supply network life-cycle). Scharle (2002), using a game theoretical approach to PFI, highlights how the difference in players' interests and values influences their strategies for collaboration. Also, existing literature showed there are formal and informal incentive mechanisms that can be used to steer buyer and supplier behaviour. The former tends to be explicit, contractual incentives such as discount systems (Sirias and Mehra, 2005), risk and benefit sharing (Dyer, 1996) while the latter is implicit, non-contractual incentives, such as reputation (Ganesian, 1994), market and critical resource access (Zeithaml and Zeithaml, 1984) and information exchange (Lamming, 1993).

There are a number of issues concerning developing incentive mechanisms in PFIs. Firstly, most literature in risk management in PFIs tend to focus on risk assessment and risk allocation from public sector perspective (Froud, 2003; Ball *et al.*, 2003) rather than an incentive issues such as risk and benefit sharing. Hurst and Reeves (2004) suggest the importance of examining appropriate share of gains from re-financing. Secondly, Dixon et al. (2005) suggest that a lack of innovation in PFI may be related to unrealistic public sector expectation; there is a need to develop better understanding of the impact of value for money measurement and valuation of risk transfer on behaviours of the private

sector. Furthermore, Grout (1997), while examining factors influencing incentives deployed in PFI building and service contracts, highlights that as firms are only remunerated for successful supply of service, their implicit incentives focus on cost-cutting rather than service enhancing activities. Additionally, incentives for the build component may depend to a greater or lesser degree on the nature of the service contract that is, by definition, difficult to draw in advance. Akintoye et al (2003) suggested that there are also difficulties in specifying the quality of service in PFI contracts. Additionally, incentives may shift over time as a result of renegotiations and changes occurring over such extended time frames (Grout, 1997, Hart et al 1997).

The Impact of Time (managing long-term relationships)

Long-term commitment is one of the key features of PFIs and the literature suggests that such arrangements have to be regarded both as an opportunity and a challenge. Its opportunities may be associated with integration and synergy between design, build and service operation (Broadbent and Laughlin, 1999; Brady et al, 2005) as well as innovative solution and whole life-cycle costing of using PFI assets (Ratcliffe, 2004). On the other hand, there are also challenges with managing long-term contracts such as uncertainty, inflexibility and management resource requirements (Froud, 2003). As an illustration, Dixon et al. (2005) found that a lack of long-term flexibility in PFI contracts has been a major concern. Also, public sector may have limited ability to engage in strategic planning with private sector (Field and Peck, 2004).

With respect to managing long-term relationships, although financial risk management and whole life-cycle costing (Bing et al., 2005) have been explored; there is a more limited understanding of the costs/benefits of long-term contracts in terms of, for instance, supplier behaviour and human resource management. In terms of supply management, there is some evidence in construction supply chains that there was a change in supplier attitudes in dealing with tender, design and construction due to a change in procurement form. However supplier's willingness to exploit risk and be innovative may be constrained by a contract with rigid specification (Hall et al, 2000). Also, it is suggested that long-term relationships enable the development of trust but arising conflicts are unavoidable in many long-term, co-operative relationships (Deakin et al, 1997). Other relationship issues relate to knowledge and information management over the whole life-cycle of PFIs contracts. For example,

El-Haram *et al* (2002) revealed one of the main barriers to the successful implementation of whole life-cycle costing is the lack of reliable and consistent data. Furthermore, Lemos *et al* (2001) suggested the need to examine particular risks and changes over the period of the project's life-cycle. Moreover, learning also appears to be one of the important issues for achieving successful PFI outcomes (Tranfield *et al.*, 2005; Brady *et al.*, 2005 and Schofield, 2004) and yet continuity of staff is, again by definition, very difficult in a 30-year contract.

METHOD

Given the relatively limited extant literature, it was decided to undertake some exploratory empirical work: a case study of a National Health Service (NHS) hospital PFI in the UK. The health sector accounts for a significant proportion of the total UK PFI population. For example in 2004, HM Treasury reported 28 PFI projects in health (36%) with a capital value of £3 billion, compared to 20 in education and skills (26%), 17 in local government (22%), 6 in transport (8%) and 5 in defence (7%) (HM Treasury, 2006). Case studies are particularly useful when exploring new areas of research (Eisenhardt, 1989). Equally, the rich qualitative and quantitative data sets generated (Yin, 1994) are particularly important for the measurement of complex and intangible phenomena (i.e. relationships, power, trust, etc.) and the need to look beyond organizational boundaries. Therefore, the adaptation of a contextualised view (Pettigrew, 1985) was a central premise of this research. Given the sheer diversity of personnel involved in such a complex project, a wide range of people with many different job roles in the key participating organisations (i.e. the NHS hospital, the contractor/special purpose vehicle, and the prime sub-contractors) were interviewed in order to capture a variety of perspectives and build rich insights relating to different stages of the project (procurement, design and builds and operation). To date eleven semi-structured, face-to-face interviews (lasting between 1 and 2 hours) have been completed. All interviews were taped and transcribed, whilst the confidentiality of participating organisations and individuals was assured. Documentation and secondary sources were also collated and analysed. A longitudinal approach in its pure form (i.e. following the contract for 30 years) was impractical in the short-term but retrospective data was collected using

the respondent-driven Critical Incident Technique (Flanagan, 1954; Bitner *et al.*, 1990; Edvardsson, 1992; Johnston, 1995; Mattsson, 1993).

RESULTS

The hospital was one of the 'first wave' or Pathfinder projects in the UK NHS in the late 1990s. The 551-bed acute district general hospital was financed, designed and built, commissioned and operated by the private sector contractor under the PFI. The deal was £135m in contract value. This contract covers a total of 30 years combined product and service provisions that included a 3 year design and build contract and 27 years of non-clinical service provision. The brand new hospital built on a 'Greenfield' site outside of the town replaced the old town centre hospital which was built in the late 1950s. The hospital opened at the end of 2002. Since that date, key changes to the original PFI contract included: refinancing, changing equity stakeholders and contracting for additional capacity in the form of a new treatment centre. There were a number of interesting issues in the political context of the procurement process. The initial bidding was put on hold for the 1997 election but after the election of a Labour government, the positive intervention of the ODPM (Office of Deputy Prime Minister) re-started the process, despite anti-PFI pressure from trade unions (e.g. UNISON). Furthermore, local politics played a significant role in the discussions about moving the district hospital from the previous town centre location to a Greenfield site.

Governance structures

Although a wide range of organisations were involved (e.g. Private Finance Unit, the Department of Health (DoH), Treasury, lawyers, accountants, architects, etc.) the principal parties to the PFI deal were the NHS Trust (the client), the Hospital Company (the contractor), the prime sub-contractor and the investors/banks. The Hospital Company is a Special Purpose Vehicle (SPV), consisting of a consortium of three major equity shareholders, including another division of the prime sub-contractor. The concession agreement was the formal agreement between the NHS Trust and its contractor, which addresses various governance issues, such as reporting and information sharing, performance measures, auditing and self-monitoring process, dispute resolution procedures and market testing during the operation phase. In addition, there were also

are a range of other agreements between different parties which also address certain governance issues.

The Contract

Most interviewees reported problems with the sheer size and complexity of the (first wave and therefore non-standard) PFI contract. This was driven initially by an ambiguous and prolonged drafting process but was increased by a time-consuming contract variations process. Intriguingly, despite its legal formality, different stakeholders interpreted the documents very differently: for instance several NHS Trust interviewees perceived the contractor as being mainly interested in 'building rather than delivering the service', highlighting how they specified cheap lift products with high maintenance costs. Conversely, the contractor argued that the specification problems had been caused, partly by the 'early project' status where pivotal contract information was sparse or missing (e.g. for a meaningful risk transfer to be assured, market tested life-cycle costs for a whole range of products – including lifts - were needed). Similarly, a number of NHS Trusts interviewees perceived the formal PFI contract to be almost exclusively about the legal and financial aspects of the deal. For instance, although the Hospital Company was responsible for the 'entirety' of the PFI contract, several interviewees argued that the Hospital Company was mostly focused on the financing (and re-financing) aspects of the governance process.

It was perhaps unsurprising therefore to discover that the formal contract that emerged from the bidding process was felt by some interviewees to be inappropriate as a mechanism for resolving operational difficulties. An informal relational approach (e.g. using an off-site event to resolve some difficulties, such as a perceived initial lack of support by the major sub-contractor for its Facilities Management (FM) role, and pre-empt others) was cited as having been more effective in specifying operational concerns. Interestingly, co-ordination across intra-organisational boundaries (i.e. within the prime sub-contractor or NHS Trust) was found to be as challenging as managing external supplier relationships. For example, the PFI involved changing roles for many different NHS staff (n.b. at a time of perceived lack of governmental resources) who needed to be consulted. Equally, there were limited communications between the building company and the service provider, despite being divisions of the same company. Here

again, the contract proved to be of limited value in resolving such governance issues.

Although the original contract may have been flawed, it was interesting to note that all parties had learnt from the experience and applied this learning when given the opportunity. The major contractor had changed its partnering strategy as a result of lessons learned in this case. For example, in more recent PFI projects, they had avoided triangular partnerships in the consortium company in order to maintain better control and financial returns. Also, there was a change in the internal structure for better co-ordination in servicing their healthcare client. With regard to the NHS Trust, there were also formal 'lessons learned' relating to procurement, design and build and operation phases; these lessons learned have been taken into account for the extension of the PFI operation in the new treatment centre.

Performance measurement and incentives

The only explicit 'incentive' mechanism discussed in the interviews was the performance penalty system. Moreover, there was no evidence of the effectiveness or otherwise of the dis-incentive system because the contract specified that certain key performance rules/sanctions were inapplicable when the utilisation of the asset exceeded 85% - a state that had pertained since the opening day of the hospital. Interestingly, one supplier interviewee commented that incentives *could* be introduced for better performance while more strict rules with sanctions *should* be installed.

Time and long-term relationships

PFI arrangements seem designed to force multi-stakeholder public sector organisations to be more disciplined and make decisions in a reasonable timeframe. However, this time compression benefit is also associated with design compromise and, crucially from an operations phase perspective, a perceived lack of time for appropriate consultation with medical staff due to rigid design schedules ("we'll be back to talk about the operating theatre lights", "we never saw them again", etc.). Speed can also impact trust and transparency as it gives the impression of opacity.

Over time, key relationships (i.e. between the NHS Trust and the contractor/subcontractor) developed and shifted: from the early days of operation where adversarial/short-term behaviour was common; to the

avowedly more collaborative relationships found in current arrangements. Here again, despite the exhaustive nature of the contract, interviewees argued that time was necessary to help parties understand each others need and for any kind of trust to develop. For example, during the design and construction phase (i.e. after the contract had been awarded) the prime sub-contractor did not allow the NHS Trust to engage its own architects. Equally, even after several years of operation, the inevitable – the longer the timeframe, the more inevitable - evolution of the buyer's requirements continue to create conditions for conflict. For instance, new standards introduced by NHS modernisation could not be incorporated in the contract. Other factors exist to break trust. For example, despite the apparently long-term 27-year service contract, the specific FM/service contract actually only lasts 5 years, before a benchmarking process is used to determine whether the same contractor will continue to provide these *soft* services (e.g. cleaning, catering and porter etc). As a result, a certain degree of mistrust continues to be evident from all parties.

One of the key learning dynamics of the case study was the overall constraint introduced as the PFI supply market was developing in parallel with the project. For example, a recurrent theme in the discussions of governance was the lack of specific skills, especially on the part of the NHS staff. At the time of the bidding process and contract drafting there were very few experienced NHS staff, or indeed any complementary training. As a corollary, once the Labour government confirmed the viability of the PFI concept, a market for such skills/experiences rapidly developed and this acted to further exacerbate one of the NHS key challenges: senior managerial continuity. In this case, most of the key individuals involved in the early phase of PFI (n.b. in both NHS Trust and prime subcontractor) have left their previous jobs.

DISCUSSION AND CONCLUSIONS

Long-term public/private relationships, as typified by PFI, are clearly innovative and may deliver a number of tangible performance benefits: such as time compression in contracting and commissioning or sustainable development and/or better efficiency and effectiveness via integrated product/service solutions. Equally, they expose uncertainty and risks over the long life-cycle of the project. Consequently, the challenge is to find ways of implementing the innovative concept of PFI

successfully. This paper reports key preliminary findings from an exploratory case study, looking at the challenges associated with managerial/governance arrangements across multiple boundaries (private and public sector, product and service provisions and extended supply network life-cycle). The preliminary research confirms that PFI is an innovative concept and that too little is known about the details of managing within the constraints of PFI/PPP. Teisman and Klijn (2004) emphasise differing values between the public and private sector that influence PFI contracting. This paper suggests that the reality 'in use' of the many different formal and informal agreements between various players necessitates a better understanding of how to define and align (i.e. incentivise different behaviours) commercial value/public value on an ongoing basis. As the research progresses, the findings may inform policy-making in this nascent area, and practice on both sides of the PFI public-private boundary. There is a need to better understand implications of PFI long-term commitment in health supply management and human resource management.

Despite much debate on PFI, there has been little empirical research especially in the area of organisation and management of PFI/PPP formation and operation (Fischbauer and Beaumont, 2003; Tranfield et al., 2005). This research seeks to make an initial contribution, but further research is needed as PFI is implemented more widely and the outcomes and implications of PFI become only apparent over time. There may be scope for applying extant models of purchasing and supply management in the PFI context but there was little evidence of their implementation in this case – and the reliance on contractual governance sits uncomfortably with the relational rhetoric of most SCM theories (e.g. Håkansson and Snehota, 1995; Tranfield *et al.*, 2005). Beyond relational approaches there may be scope for exploring how to incentivise PFI contracts (e.g. Sirias and Mehra, 2005) and whether contracts function as substitutes or complements (Poppo and Zenger, 2002). Aware of the context bounded nature of many of our observations, further conceptual and empirical work is also needed to (a) better classify PFI systems according to the nature of assets (product and service system), size of PFIs, specific timeframe, etc.; (b) understand the effective management of transitions between the very different phases of a PFI project, and (c) explore the challenges associated with regular changes in senior actors/individual players and how to manage knowledge capture and information sharing over long life-cycle project.

ACKNOWLEDGEMENTS

We would like to express our gratitude to the EPSRC Grand Challenge Programme for their funding. Our thanks also go to all the organisations and individuals which took part in the research.

REFERENCES

- Akintoye, A., Hardcastle, C., Beck, M., Chinyio, E. and Asenova, D. (2003). "Achieving best value in private finance initiative project procurement." *Construction Management and Economics*, **21** (5): 461-470.
- Baiman, S. and Rajan, M.V. (2002). The Role of Information and Opportunism in the Choice of Buyer-Supplier Relationships. *Journal of Accounting Research*, **40** (2): 247-278.
- Ball, R., Heafey, M. and King, D. (2003). "Risk transfer and value for money in PFI projects." *Public Management Review*, **5** (2): 279-290.
- Bennett, J. and E. Iossa (2006). "Building and managing facilities for public services." *Journal of public economics*, **forthcoming**.
- Bing, L., Akintoye, A., Edwards, P. J. and Hardcastle, C. (2005). "The allocation of risk in PPP/PFI construction projects in the UK." *International Journal of Project Management*, **23** (1): 25-35.
- Bitner, M. J., Booms, B. H. and Tetreault, M.S. (1990). "The Service Encounter: Diagnosing Favorable and Unfavourable Incidents." *Journal of Marketing*, **54** (1): 71-84.
- Bouckaert, G. and Halachmi, A. (Eds.) (1995) *The Enduring Challenges in Public Management: Surviving and Excelling in a Changing World*. San Francisco, CA: Jossey-Bass.
- Brady, T., A. Davies, and Gann, D. (2005). "Can integrated solutions business models work in construction?" *Building Research and Information*, **33**(6): 571-579.
- Broadbent, J. and Laughlin, R. (1999). "The Private Finance Initiative: Clarification of a Future Research Agenda." *Financial accountability & management* **15**(2): 95-114.

- Broadbent, J. and Laughlin, R. (2005). "The role of PFI in the UK Government's Modernisation Agenda." *Financial Accountability & Management*, **21** (1): 75-97.
- Dixon, T., Pottinger, G. and Jordan, A. (2005). "Lessons from the private finance initiative in the UK: Benefits, problems and critical success factors." *Journal of Property Investment and Finance*, **23**(5): 412 - 423.
- Deakin, S, Lane, C and Wilkinson, F. (1997) Contract Law, trust relations and incentives for cooperation: a comparative study, In Deakin, S and Michie, J. (eds) Contract, Cooperation, and Competition. Oxford, 1997
- Dyer, J. H. (1996). "Specialised Supplier Networks as a Source of Competitive Advantage: Evidence from the Auto Industry." *Strategic Management Journal*, **17**: 271-291.
- Edvardsson, B.N. (1992). "Service breakdowns: A study of critical incidents in an airline." *International Journal of Service Industry*, **3** (4): 17-29.
- El-Haram, M. A., S. Marenjak, et al. (2002). "Development of a generic framework for collecting whole life cost data for the building industry." *Journal of Quality in Maintenance Engineering*, **8**(2): 144 - 151.
- Eisenhardt, K., (1989). "Building theories from case study research." *Academy of Management Review*, **14** (4): 532-550.
- Erridge, A. (2002). "Partnerships and public procurement: building social capital through supply relations." *Public Administration*, **80** (3): 503-522.
- Essig, M. and Batran, A. (2006). "Public-private partnership - Development of long-term relationships in public procurement in Germany." *Journal of Purchasing & Supply Management*, **11**(5&6).
- Field, J. E. and E. Peck (2003). "Public-private partnerships in healthcare: the managers' perspective." *Health & Social Care in the Community*, **11**(6): 494-501.
- Fischbacher, M. and Beaumont, P. B. (2003). "PFI, Public-Private Partnerships and the Neglected Importance of Process: Stakeholders

- and the Employment Dimension." *Public Money & Management*, **23** (3): 171-176.
- Flanagan, J.C. (1954). "The critical incident techniques." *Psychological Bulletin*, **51** (4): 327-359.
- Froud, J. (2003). "The Private Finance Initiative: risk, uncertainty and the state." *Accounting Organizations and Society*, **28** (6): 567-589.
- Froud, J. and Shaoul, J. (2001). "Appraising and Evaluating PFI for NHS Hospitals." *Financial Accountability & Management*, **17** (3): 247-270
- Ganesan, S. (1994). "Determinants of long-term orientation in buyer-seller relationships." *Journal of Marketing*, **58**: 1-19 [April].
- Grant, J. and Dutton, A.L. (2001). "The Private Finance Initiative: Panacea for all procurement or a recipe for disaster?" *The 10th International Annual IPSERA Conference*, 2001, 445-457
- Grimshaw, D., Vincent, S. and Willmott, H. (2002). "Going privately: Partnership and outsourcing in UK public services." *Public Administration*, **80** (3): 475-502.
- Grout, P. (1997). "The economics of the private finance initiative." *Oxford Review of Economic Policy*, **13** (4): 53-66.
- Håkansson H. & Snehota I. (1995) "*Developing Relationships in Business Networks*", London: International Thomson Business Press.
- Hall, M., R. Holt, et al. (2000). "Private finance, public roads: configuring the supply chain in PFI highway construction." *European Journal of Purchasing & Supply Management* **6**(3-4): 227-235.
- Hart, O. (2003). "Incomplete contracts and public ownership: Remarks, and an application to public-private partnerships." *Economic Journal*, **113** (486): C69-C76.
- Hart, O., Shleifer, A and Vishny, R (1997) "The proper scope of government: theory and an application to prison", *Quarterly Journal of Economics*, **112**, 1119-58
- HM Treasury (2006) Website: http://www.hm-treasury.gov.uk/media/F11/C2/pfi_stats_furtherinfo_290404.pdf [accessed 02 April 2006]

- Hurst, C. and E. Reeves (2004). "An economic analysis of Ireland's first public private partnership." *The International Journal of Public Sector Management* **17**(5): 379-388.
- Johnston, R. (1995). "The determinants of service quality: Satisfiers and dissatisfies." *International Journal of Service Industry Management*, **6** (5): 53-71.
- Klijn, E. H. and Teisman, G. R. (2003). "Institutional and strategic barriers to public-private partnership: An analysis of dutch cases." *Public Money & Management*, **23** (3): 137-146.
- Koppenjan, J. F. M. (2005). "The formation of public-private partnerships: Lessons from nine transport infrastructure projects in the Netherlands." *Public Administration*, **83** (1): 135-157.
- Lamming, R.C. (1993). "*Beyond the partnership: strategies for innovation and lean supply*." London: Prentice Hall, Hemel Hempstead.
- Lemos, T. d., M. Betts, et al. (2001). "Model for Management of Whole Life Cycle Risk Uncertainty in the Private Finance Initiative (PFI)." *Journal of Project Finance* **6**(4): 68.
- Lonsdale, C. (2005a). "Risk transfer and the UK private finance initiative: a theoretical analysis." *Policy and Politics*, **33** (2): 231-249.
- Lonsdale, C. (2005b). "Post-contractual lock-in and the UK Private Finance Initiative (PFI): The cases of national savings and investments and the Lord Chancellor's Department." *Public Administration*, **83** (1): 67-88.
- Mattsson, J. (1993). "How bank loan officers evaluate persons applying for credit." *International Journal of Bank Marketing*, **11** (2): 25-34.
- Pettigrew, A. (1985). "Contextualist Research: A Natural Way to Link Theory and Practice". In E. Lawler (Ed.), *Doing Research That Is Useful for Theory and Practice* (pp. 222-274). San Francisco: Josey-Bass.
- Pietroforte, R. and Miller, J.B. (2002). "Procurement methods for US infrastructure: historical perspectives and recent trends." *Building Research and Information*, **30** (6): 425-434.

- Poppo, L. and T. Zenger (2002). "Do Formal Contracts and Relational Governance Function as Substitutes or Complements?" *Strategic Management Journal* **23**(8): 707-725.
- Ratcliffe, A. (2004). "The Real Benefit of the PFI?" *Public Money & Management* **24**(3): 134-135.
- Scharle, P. (2002). "Public-Private Partnership (PPP) as a Social Game." *Innovation: The European Journal of Social Sciences*, **15** (3): 227-252.
- Schofield, J. (2004). "A Model of learned implementation." *Public Administration*, **82** (2), 283-308
- Sirias, D. and Mehra, S. (2005). "Quantity discount versus lead time-dependent discount in an inter-organizational supply chain." *International Journal of Production Research*, **43** (16): 3481-3496.
- Teicher, J., Q. Alam, and Van Gramberg, B. (2006). "Managing trust and relationships in PPPs: some Australian experiences." *International Review of Administrative Sciences* **72**(1): 85-100.
- Teisman, G. R. and Klijn, E.H. (2004). "PPPs: Torn between two lovers." *EBF Debate*, Summer (**18**): 27-29.
- The Stationery Office (2000) *Public Private Partnerships, The Government's Approach*
- Tranfield, D., Rowe, A., Smart, P. K., Levene, R., Deasley, P. and Corley, J. (2005). "Coordinating for service delivery in public-private partnership and private finance initiative construction projects: early findings from an exploratory study." *Proceedings of the Institution of Mechanical Engineers Part B-Journal of Engineering Manufacture*, **219** (1): 165-175.
- Whorley, D. (2001). "The Andersen-Comsoc affair: Partnerships and the public interest." *Canadian Public Administration-Administration Publique Du Canada*, **44** (3): 320-345.
- Williamson, O. (1985). *The economic institutions of capitalism*. New York: Free Press.
- Yin, R. K. (1994). *Case Study Research: design and methods*. London: Sage.

Zeithaml, C.P. and Zeithaml, V.A., 1984. Environmental management: revising the marketing perspective. *Journal of Marketing*, **48**, pp.46-53.