



*Citation for published version:*

Zheng, J, Roehrich, JK & Lewis, M 2008, 'The dynamics of contractual and relational governance: Evidence from long-term public-private procurement arrangements', *Journal of Purchasing and Supply Management*, vol. 14, no. 1, pp. 43-54. <https://doi.org/10.1016/j.pursup.2008.01.004>

*DOI:*

[10.1016/j.pursup.2008.01.004](https://doi.org/10.1016/j.pursup.2008.01.004)

*Publication date:*

2008

*Document Version*

Peer reviewed version

[Link to publication](#)

## University of Bath

### Alternative formats

If you require this document in an alternative format, please contact:  
[openaccess@bath.ac.uk](mailto:openaccess@bath.ac.uk)

#### General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

#### Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

**THE DYNAMICS OF CONTRACTUAL AND RELATIONAL  
GOVERNANCE: EVIDENCE FROM LONG-TERM PUBLIC-  
PRIVATE PROCUREMENT ARRANGEMENTS**

**Jurong Zheng\*, Jens K. Roehrich, Michael A. Lewis**

Centre for Research in Strategic Purchasing and Supply, School of  
Management, University of Bath, BA2 7AY, UK.

Jurong Zheng\*

[j.zheng@bath.ac.uk](mailto:j.zheng@bath.ac.uk)

Tel: +44 (0)1225 386512

Jens K. Roehrich

[j.roehrich@bath.ac.uk](mailto:j.roehrich@bath.ac.uk)

Tel: +44 (0)1225 383761

Michael A. Lewis

[m.a.lewis@bath.ac.uk](mailto:m.a.lewis@bath.ac.uk)

Tel: +44 (0)1225 386536

\* Corresponding author

# **THE DYNAMICS OF CONTRACTUAL AND RELATIONAL GOVERNANCE: EVIDENCE FROM LONG-TERM PUBLIC-PRIVATE PROCUREMENT ARRANGEMENTS**

## **Abstract**

This paper investigates the detail and dynamics of how contractual and relational governance mechanisms are deployed in managing complex, long-term public-private supply arrangements. Using empirical data from two UK Private Finance Initiative (PFI) cases, the paper analyses the interplay of governance mechanisms along a timeline of project phases. Conceptual and practical findings confirm that relational and contractual mechanisms are indeed complementary forms of exchange governance but also that the relational intentions of all parties frame whether the contract is interpreted as a written sign of distrust or commitment. Equally, relational and contractual governance follow different development paths: both follow cumulative trajectories but (a) inter-personal relational mechanisms are more incremental and fragile, whereas (b) contractual mechanisms move with fewer degrees of freedom and ‘anchor’ the exchange throughout the life cycle. Finally, the different development characteristics of relational and contractual mechanisms mean that their dynamic interplay does not follow consistent patterns. The paper concludes with suggestions for more longitudinal studies.

**Keywords:** Public private partnership, long-term relationship, contractual and relational governance

## **1. Introduction**

This paper contributes to a debate about the dynamics of inter-organisational governance. It explores the detail of contractual and relational governance mechanisms and their changing significance over time through an investigation of the management of long-term arrangements between public buyers and private service providers. Previous studies have suggested that contractual and relational governance need to be considered as complementary mechanisms (Ferguson et al., 2005; Poppo and Zenger, 2002) but very little work has explored the details and dynamics of this interplay (Klein Woolthuis et al., 2005). Specifically, this paper aims to develop a richer understanding of the detailed composition of these mechanisms and their contingent interplay over the life of an exchange relationship. This will contribute to better aggregate conceptualisation and theory building and generate more meaningful practical guidance.

In order to access the phenomena two long-term supply arrangements have been investigated; both are UK Private Finance Initiative (PFI) design-build-finance-operate contracts with a 25- and 30-year lifespan respectively. A key consideration in selecting PFI arrangements as the empirical focus of the research was the opportunity this provided to review specific supply arrangements over an extended period of time. In other words, the buyer-supplier 'lock-in' inherent in Public-Private Partnership (PPP)/PFI actually makes it particularly useful for exploring exchange dynamics. The next section presents the conceptual background to different contractual and relational governance mechanisms and their interplay over time. Additionally, the specific governance challenges of public-private relationships are reviewed. The third and fourth sections describe the methodology and case findings. The final section presents the main conclusions and implications for future research.

## **2. Conceptual background**

This section draws upon a range of literature to explore relational and contractual governance as both discrete and complementary constructs.

Additionally, the section summarises some of the key literature on PPP/PFI procurement arrangements; especially where this research touches upon the paper's core conceptual concerns.

## **2.1. Contractual governance**

Arguably the dominant theoretical logic for explaining inter-organizational exchange is the Transaction Cost Economics (TCE) perspective. Assuming opportunism and bounded rationality (Rindfleisch and Heide, 1997), TCE asserts that firms attempt to minimize transaction costs by “assigning transactions (which differ in their attributes) to governance structures (the adaptive capacities and associated costs of which differ) in a discriminating way” (Williamson, 1985, p. 18). As a result, organizations only internalise activities where adverse costs might arise from operational difficulties in a market exchange, primarily driven by uncertainty, frequency of exchange, and asset-specificity<sup>1</sup>. Furthermore, TCE argues that parties have to safeguard against the hazard of opportunism by applying legal contracts, specifying what is acceptable and what is not, with threats of legal enforcement or non-legal retribution (Williamson, 1975).

‘Classical’ contract theory assumes that complete contracts can be drafted (Lyons and Metha, 1997), that is containing all the necessary safeguards to mitigate opportunistic behaviour and reduce transactional ambiguity by clear specification of what is and what is not allowed within a relationship (Lui and Ngo, 2004). For example, increasing the risks associated with opportunistic behaviour by stipulating penalties that change the pay-off structure (Parkhe, 1993). Conceptually close to TCE, an optimal contract means one with the lowest transaction costs relative to outcome.

In practice however, drafting costs and asymmetric information render most contracts “incomplete”. Equally, contracting can only define remedies for foreseeable contingencies and/or at best specify processes for resolving unforeseeable outcomes (Poppo and Zenger, 2002). Incomplete contracts

---

<sup>1</sup> An asset is transaction specific if its value in a transaction with another party is reduced and correspondingly, the larger the value ‘gap’ between its best and best-alternative use, the greater the specificity of the asset.

contain non-legally enforceable and/or poorly specified intentions, promises, and conditions that may easily be misinterpreted by the courts (Deakin and Wilkinson, 1998). Consequently, an incomplete contract is defined 'as an *agreement that goes beyond what is verifiable*' (Chen, 2000, p.211).

Interestingly, although incomplete contracts inevitably offer less certainty (i.e. fewer legal safeguards) for the contracting parties, non 'legally enforceable' elements of an incomplete contract can still provide elements of formal control, by indicating limits of acceptability. Moreover, because gaps in an incomplete contract are only filled as contingencies arise, they can actually underpin greater flexibility in the execution of a supply agreement (Klein Woolthuis et al., 2005).

Contracts are central to most supply arrangements: providing a legally bound, institutional framework in which each party's rights, duties, and responsibilities are codified; and goals, policies and strategies underlying the relationship are specified. Although emphasis is normally placed on the prevention of inappropriate agent behaviour (e.g. opportunism), these formal agreements can facilitate effective exchange (Carson et al., 2006; Luo, 2002).

## **2.2. Relational governance**

Although TCE may provide the dominant economic logic for determining organisational scope, more managerial research typically applies a 'relational' logic to supply arrangements. Indeed such an approach is often positioned as being distinct from the 'impersonal, discrete and short-term' transaction-based approach. Contracts have been presented as a manifestation of power that can be effective in certain circumstances, but more often promote conflict (Gaski, 1984) and defensive behaviour (Hirschman, 1984). The relational perspective emphasises the role of trust in achieving mutually successful supply outcomes. The industrial network model developed by the Industrial Marketing and Purchasing (IMP) group (Håkansson and Snehota, 1995) for example suggests that inter-organisational relationships develop when two companies build up activity links, resource ties, and actor bonds. Relational governance mechanisms therefore, based upon social processes,

like trust, that promote norms of flexibility, solidarity and information exchange, can safeguard, albeit informally, against exchange hazards and facilitate the enforcement of obligations (Baker et al., 2002; Granovetter, 1973; Granovetter, 1985; Gulati, 1995; Ring and Van de Ven, 1994). Similarly, unforeseeable contingencies may be accommodated by a bilateral approach to problem solving which facilitates adaptations – especially within a long-term relationship (Zand, 1972). A variety of enforcement mechanisms such as the expectation of repeat business, reputation effects, social obligations, and fulfilment of basic social needs are likely to encourage exchange-specific investments (Poppo and Zenger, 2002) and support the use of relational governance (Zhou and Poppo, 2006). Conversely, Larson (1992) highlights that the development and maintenance of relational governance, including a network of social ties, may be time and resource consuming. Intensive social ties may restrict companies from acquiring information and spotting new opportunities outside their networks (Uzzi, 1997). Equally, as scale and scope of exchange increases, exchanges are simply harder to maintain and sanction through long-standing ties because repeat business and cultural homogeneity are less likely (North 1990). The relational perspective suggests that exchange parties develop, test, observe and confirm the existence of cooperative relationships over time and therefore, it is asserted, relational governance can operate as a self-enforcing safeguard which effectively and - in certain circumstances - more efficiently substitutes for contracts.

### **2.3. Links between contractual and relational governance**

Although contractual and relational mechanisms have been positioned as substitute arrangements; in isolation, both perspectives have significant limitations. For example, a contract can never stipulate every potential contingency and an excessively detailed contract can be both inflexible and difficult to monitor ex-post (Macaulay, 1963; Macneil, 1980) meaning that, paradoxically, exchange governance over-reliant on contractual mechanisms may lack enforcement capabilities. Conversely, if relational governance goes

beyond calculative self-interest it can yield blind trust, which will not survive in competitive environments (Williamson, 1993).

Various studies have emphasised the essentially complementary characteristics of different governance arrangements (Larson, 1992; Poppo and Zenger, 2002; Zucker, 1986). Some authors arguing that the joint use of contractual and relational mechanisms generates more efficient outcomes than the use of either in isolation (Klein-Woolthuis et al., 2005; North, 1990). Clearly articulated terms, remedies, and processes of dispute resolution in combination with relational norms of solidarity, bilateralism, and continuance may yield greater confidence to cooperate (Baker et al., 1994).

Some studies have also explored the dynamic and contingent nature of the inter-relationship. For example, formal safeguards may support relationships in their earlier, more vulnerable phases (Poppo and Zenger, 2002). Equally, relational governance strongly complements contractual processes when facilitating continuity in the face of changes and conflicts (Macneil, 1978). Although there is a reasonable body of evidence to support an integrative view of contractual and relational governance as complementary mechanisms, the precise nature of their inter-relationship is much less well documented. In particular, there is little in-depth empirical research examining how, why and when contracts and relational mechanisms complement and/or substitute for each other (Klein Woolthuis et al., 2005).

#### **2.4. Public-Private Partnerships**

Public sector service provision has become more dynamic and diverse (Kooiman, 1993) whilst facing budgetary constraints and a corresponding pressure to become more effective and efficient (Bouckaert and Halachmi, 1995). Attempting to resolve this apparent contradiction, many governments have turned to Public-Private Partnership arrangements where private organisations deliver long-term infrastructure projects, and then operate and manage them following an output specification from the public sector purchaser (Broadbent and Laughlin, 2003; Grout, 1997). A growing number of European, in particular the UK, Portugal and Spain, and non-European

countries, in particular Australia and the US, make significant use of private sector capabilities and capital in a range of infrastructure-related projects such as bridges, tunnels, rails, roads, airports and canals (Confederation of British Industry, 2007; Walder and Amenta, 2004). The Public-Private Partnership (PPP) label covers a number of different arrangements including the Private Finance Initiative first established by the UK government in 1992. This was conceived as a mechanism for *'purchas[ing] quality services on a long-term basis so as to take advantage of private sector management skills incentivized by having private finance at risk'* (the Stationery Office, 2000). To illustrate the scale of this market, more than one thousand PPP contracts have been signed in the EU in the last 15 years, representing a capital value of almost 200 billion euro (Blanc-Brude et al. 2007). The UK remains the lead user of such arrangements however, with successive UK governments deploying PPP/PFI investment vehicles as the principal method for procuring public sector capital projects and delivering associated services. (Broadbent and Laughlin, 2005). By March 2006, UK PFI contracts for the construction of schools, prisons, bridges, hospitals, roads and military equipment accounted for a capital value of around £50 billion (H.M. Treasury, 2006). Fig. 1 presents the distinctive phases of a typical PPP/PFI project.

**[Please INSERT: Fig. 1. Generic timeline for a PFI project ABOUT  
HERE]**

## **2.5. Contractual and relational governance in PPP/PFI**

PPP/PFI contracts are complex (typically consisting of multiple agreements covering the design, building, finance and operation phases of a project) and incomplete (parties can not specify legally enforceable safeguards for the vast number of future contingencies at the outset of a 30 years relationship) (Grimey and Lewis, 2004; Hart, 2003; Parker and Hartley, 2003). Moreover, long-term PFI supply arrangements tend to increase asset specificity (Bennett and Iossa, 2006; Lonsdale, 2005) and uncertainty related to long-term supplier commitment (Leiringer, 2006). Against this backdrop, researchers

have identified a number of significant challenges associated with formal inter-organisational governance. For example, operational (e.g. traffic volumes) and whole life costing forecasts are central to the PPP bidding process, yet ex-ante, there is inevitably a lack of reliable and consistent data (El-Haram et al., 2002).

Given these challenges to contractual governance, the literature suggests the countervailing importance of relationships in co-ordinating intra- and inter-organisational networks with a multiplicity of stakeholders (Tranfield et al., 2005). Koppenjan (2005) for example, argues that early interaction may help to develop common understanding and mutual trust and thus positively impact on contract negotiation. Conversely, there are significant embedded difficulties with the effective application of relational mechanisms in public-private relationships such as power imbalance (Grimshaw et al., 2002), post-contractual supplier lock-in (Lonsdale, 2005), divergent values and strategies<sup>2</sup> in both contractual negotiations and subsequent performance management (Teisman and Klijn, 2004), and inappropriate risk and benefit sharing (Dixon et al., 2005; Erridge and Greer, 2002).

### **3. Research methodology**

This research explored the detail and dynamics of contractual and relational governance mechanisms and their changing significance over time. In order to investigate these phenomena in their natural context (Pettigrew 1985), generating the rich qualitative and quantitative data sets that are particularly important for the measurement of complex and intangible phenomena, the case study method was selected (Yin, 2002). Two Design, Build, Finance and Operate (DBFO) PFI projects were investigated: a hospital and an emergency services training facility. Table 1 summarises the key characteristics of the cases. Some data have been disguised for reasons of confidentiality.

---

<sup>2</sup> It has been argued that many of the UK Private Finance Initiative contracts have been influenced more by politics than economic rationality (Lonsdale 2005).

**[Please insert: Table 1: Overview of key features of two PFI case studies, about here]**

Although, inevitably, the projects differ in some key aspects they were both selected as well established exchange relationships - at the time of the research both had reached the operation stage. The hospital was among the 'first wave' of PFI healthcare projects in the UK, while the training facility was a 'pathfinder' PFI project for the emergency services. Equally, as early projects, both were governed by bespoke concession agreements that detail the roles and responsibilities of the various different parties concerning the different phases of the PFI.

Although a longitudinal approach in its pure form, which means following the contract over 25 or 30 years, was impractical, retrospective data was collected using the respondent-driven critical incident technique (Bitner et al., 1990; Flanagan, 1954). Critical incidents or events that had a positive or negative impact on the relationship that occurred during the different PFI project phases (i.e. procurement/bidding, construction and operation phases) were mapped along a timeline. While the case study method aims to deliver a global case description, the critical incident technique maps critical incidents as experienced by individual respondents.

Thirty-five semi-structured, face-to-face interviews with different key stakeholders (lasting between one to two hours) were conducted over a period of two years. This includes fifteen interviews with public sector organisations and twenty with private sector organisations. The research acknowledged the complex network associated with PFI case studies and thus data collection moved beyond the dyadic relationship. Additional interviews were conducted with key stakeholders such as sub-contractors and relevant government departments. The breadth of interviewees was necessary to capture a variety of perspectives and build rich insights relating to different phases of the two projects. All interviews were taped and transcribed, whilst the confidentiality of participating organisations and individuals was assured. Reliability of interview data was strengthened through triangulation of data

sources including secondary sources such as company documentation and reports from HM Treasury and the Audit Commission.

NVivo7 was used to support analysis of the interview transcripts and the critical incidents highlighted. Specific coding included contextual variables and the level of significance attached to the use of relational (RELN) and contractual (CTR) governance mechanisms. Measuring significance of use of contractual governance was based on any indication of documentary changes or explicit referral event – often with 3<sup>rd</sup> party legal support being involved. Given that a precise calibration of relational governance was problematic, a proxy measure rating the significance of specific inter-personal relationships was used. This was based on Zaheer's et al. (1998) study of inter-personal trust between firms' boundary spanners. Coding items included dimensions such as reliability, credibility, fairness, goodwill and competence across individuals (Seppänen et al., 2007). For each critical event, an interpretative assessment was then made of the relative magnitude of both mechanisms (using a simple 3-point scale: high, medium, low) and this was then plotted along the project timeline, providing a graphical illustration of governance interplay over time. In addition, to facilitate our interpretation of commonalities and differences between cases, data matrices were used (Miles and Huberman, 1994) to analyse changes in key contextual variables in relation to changing patterns of governance mechanisms.

#### **4. Case findings**

This section presents a description of the two cases with key findings presented along the project phases.

##### **4.1. Hospital**

Faced with a regional requirement to expand healthcare capacity in order to meet rising demand, a decision was taken to replace a town centre hospital which had been built in the late 1950s and centralise a number of other health facilities into one large, new, hospital on a 'greenfield' site outside the town. The new hospital was designed, built, financed and operated (DBFO) by a

private contractor. Fig. 2 shows the variety of organisations involved in the project. The principle public-private arrangement is a long-term contractual relationship between a single National Health Service (NHS) Trust<sup>3</sup> and a private partner, a company that combines both a building and a facility management (FM) division. This concession agreement covers a total of 30 years combined product and service provision, split into two distinct phases. The first phase covers three years of designing and building the hospital, whereas the second phase covers the service provision over a time period of 27 years.

**[Please INSERT: Fig. 2. Overview of hospital PFI structure ABOUT HERE]**

Since signing the contract in the late 1990s, the contract has been modified to accommodate changes in the stakeholder equity structure and, in 2003 the concession agreement, an umbrella contract covering the rights and obligations during the construction and operation phases, was adjusted to incorporate additional capacity in the form of a multi-bed Diagnostic Treatment Centre at an additional cost of almost £30M. Interestingly, several interviewees from the Trust expressed concern that the Hospital Company's<sup>4</sup> main objectives focused too much on the financing/re-financing of the deal and not on the 'entirety' of the PFI contract.

#### Bidding and procurement

Although the initial bidding process was put on hold during a general election, it resumed after the election of a new government who confirmed their commitment to the policy. Overall, the bidding and contract negotiating process spanned five years. Given that there was a very limited supply

---

<sup>3</sup> National Health Service Trusts in England and Wales are not 'legal' trusts but are better described as public sector corporations. Each trust (in this case focused around hospitals) is headed by a board consisting of executive and non-executive directors, and is chaired by a non-executive director.

<sup>4</sup> 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.

market for such complex performance provision, only two companies bid for this project, the relationship between the public and private organisations could be best characterised as supplier-dominant. The small number of bidders can be traced back to a relatively underdeveloped PFI supply market in the late 1990s. The successful contractor was one of only a few players in the PFI market with experience of designing, building, financing and operating a hospital. Moreover, the NHS Trust had limited understanding and, by definition as an early project, almost no experience of PFI procurement processes. All of these factors contributed to an environment where there was limited inter-organisational and inter-personal trust during the bidding and contract negotiation phases. Interviewees talked of *'[...] an aggressive contract approach [...] and management style [...]'* adopted in the early project phases. Difficulties also arose with ineffective information flow across organisations at this early project phase. For instance, a contractor interviewee pointed out that the public partner did not inform them about affordability problems which arose in the early phases of the project. This miscommunication between the parties led to costly and time-consuming redesign and renegotiation processes. Furthermore, it was difficult to develop inter-personal relationships with a high turnover of key personnel in the NHS Trust project team.

The contract was perceived by both parties as playing a central role in governing the complex, long-term supply arrangement, in minimising risks and consequently achieving desired project outcomes. As a result, an extensive bespoke and expensive contract was drafted to govern the relationship between the Trust and its private contractor. It addresses issues such as reporting and information sharing, performance measures, payment mechanisms and dispute resolution and termination procedures.

#### Design and construction

During the design and construction phase, the public-private exchange was still characterised by a lack of trust and adversarial, short-term oriented behaviour was common. Contractual governance mechanisms were found by

most interviewees to be predominating in the exchange at this time. One NHS Trust interviewee described the project manager of the construction sub-contractor as *'[...] an aggressive, old-fashioned contractor man, who has taken the role that these people had to perform to the contract'*. However, both parties experienced various problems when implementing and operating the bespoke contract in a day-to-day operation. For example, the building sub-contractor installed a cheaper hospital lift option that, in the short-term, yielded cost-effectiveness but led in the long-term to higher maintenance costs and service disruptions during the operating phase. The lift problem occurred because the contract did not clearly specify the necessary requirements for a whole-life costing approach. Several interviewees highlighted how early PFI contracts were more challenging because of the limited amount of data relating to issues such as life-cycle costs of products. Furthermore, there was a great deal of post-contractual variations. One NHS Trust interviewee pointed out *'[...] it's been a fair few post-contract variations and that's probably because the specs weren't robust or the way that people want to change'*.

### Operation

Once the exchange had entered its operations phase, the buyer began working with a different division of the prime contractor. At this point there was also evidence of greater bilateral awareness of the benefits of a long-term and collaborative relationship. A more informal approach, still in combination with contractual governance mechanisms, was cited as having been more effective in solving day-to-day operational difficulties. For example, a few months into this phase, key project stakeholders used an off-site 'away-day' to develop and shape the relationships among senior personnel. Various working groups consisting of personnel from each organisation were set up to work on specific service improvement activities. The evidence of this more balanced approach to governance was particularly evident in the approach to developing and implementing the 5-year benchmarking and market (re)testing procedures set out in the contract. The Trust and the FM sub-

contractor, together with the Hospital Company, developed common objectives and procedures to facilitate a more effective benchmarking procedure for all parties. These developments aside, there was still evidence of a lack of trust between the hospital company, the Trust and the prime contractor. One Trust interviewee pointed out that ‘there is always an *interesting dilemma in terms of how open book a relationship is [...]*’. As a specific illustration, poor information sharing on life-cycle costing hindered the development of an effective through-life building and equipment maintenance programme.

#### **4.2. Emergency services training facility**

In the mid-1990s a number of UK emergency services personnel lost their lives in various operational incidents. Resultant Health and Safety Executive investigations suggested that a possible cause of these incidents was a lack of practical and realistic training. Central Government subsequently urged all emergency services and their local government overseers to invest in high quality training. The case study project was a joint initiative between three regional emergency service providers seeking to achieve economies of scale from a shared training facility. Fig. 3 presents an overview of the different key stakeholders involved in the project. The principle public-private arrangement is a long-term contractual relationship - for the design and build of a state of the art training facility and its subsequent operations including the delivery of training services – between these three public clients and a private partner. Design and build work was sub-contracted to a construction company while the long-term FM service provision was sub-contracted to the prime contractor’s own business division

**[Please INSERT: Fig. 3 Overview of emergency services PFI structure ABOUT HERE]**

Bidding and procurement

A number of firms expressed early interest in the contract and, as a result, the buyer ran workshops and presentation days (supported by their legal and financial advisors) to help manage the pre-bidding process. Eventually, 5 firms submitted formal tenders and one was selected as preferred bidder. Interestingly, although neither partner had any direct previous experience of PFI contracts, with experienced external support the bidding and contract negotiation phase took place on a largely informal basis and focused mainly on evaluating the competences and trustworthiness of the partner. Equally, although the relationship did not build on previous experience of working together, the public buyers' project manager stated that a trusting relationship was established before the parties signed the contract. For instance, prior to signing the contract the private partner took on the risks and investments involved in finding an appropriate site for the training centre, thereby clearly signalling a commitment to making the project a success. The project manager emphasised the importance of having a private partner who took 'all the risks, all the investments and so on and they are getting nothing back until of course we [the emergency services] start to occupy our training centre on day one [...]'.

The development of an early trusting relationship was based primarily on inter-personal relationships between boundary-spanners from both organisations. The training centre's director reported that the private partner's representative during the building phase '*[...] talked the [Emergency Services] language [and] he did more than the job [...]*'. Although this phase was characterised by relational governance mechanisms such as trust and information sharing, the outcome of the negotiating phase was a very detailed contract. The various contract clauses focused on safeguarding property rights and spill-over including, for instance, costing structures, secrecy of information, ownership, division of labour, duration of cooperation, and various procedures for relationship termination. The contract also included clauses on the project's management side such as project plans and meeting frequency.

## Design and construction

Interviewees from both parties stressed the point that their successful experience in the earlier project phases made them confident that they could jointly achieve a successful construction of the training centre and associated service delivery. However, the high level of inter-personal trust, based on the commitment of both parties during the pre-contractual phase could not be fully sustained once a key boundary-spanner from the private partner left the project. Nevertheless, the change in personnel did not completely ‘drain the reservoir’ of inter-organisational trust built up during the early project phases. For instance, during the construction phase relational mechanisms were deployed to solve problems regarding many ‘grey areas’ in the output specifications of the contract. The public partner’s project manager highlighted that *[...] even though we are starting from a point of zero knowledge [...] we have evolved together, but need to be reflecting those changes in the actual contract [...] but we have highlighted again that this is likely to be a permanent requirement [and] it might not be that we are meeting every month or so.’*

## Operation

From the outset, both parties were willing to be flexible in the application of the contract (i.e. there was no enactment of penalty systems to punish non-contractual fulfilments). For example, a malfunctioning water pipe system caused considerable damages to the training centre’s gymnasium in the early days of operation, thus impacting its availability for some time. The public partner was contractually eligible to claim back financial losses caused by the water damage, but decided to solve the problem using relational governance mechanisms instead of contractual mechanisms. The training centre manager explained that *[...] there is lots of stuff going on underneath the contract, unwritten, that keeps the place [training centre] running [...]*. Indeed despite the emphasis placed by both parties - during the contract negotiation phase - on ensuring that legally enforceable safeguards were in place, several interviewees stated that they sometimes felt tied down by the detailed

contract. Consequently, in order to simplify the contractual terms of day-to-day operations, a set of agreements covering aspects of the operation phase were used instead of following the complex and detailed contract.

The relational governance approach was also found to be appropriate in dealing with contract variations during the early stages of operation. Instead of using a time-consuming contract variations process, it was agreed to implement contract changes on a yearly basis through a time efficient contract steering group made up of representative from both partners. The public sector's project manager stated that '*[...] every time something changed we [public and private partner] did not necessarily want to go running off to our various lawyers and spend a lot of time and money if there was just a minor change to the operational relationship [...]*'. Furthermore, collaborative behaviour based on a trusting relationship could also be witnessed among staff that worked together in the training centre on a day-to-day basis. The private partner personnel provided administration support and all maintenance on-site while the public buyer provided training and support for managing domain-specific courses.

## **5. Discussion**

This section is structured in two parts. The first revisits and extends the literature asserting the complementary nature of contractual and relational governance. The second explores the dynamics of contractual and relational governance. Both parts also reflect more generally on issues relating to the management of PPP/PFI projects.

### **5.1. Contractual and relational governance**

The case data supports the broad assertion that contractual and relational governance are complementary exchange mechanisms, but also makes a more specific contribution to the debates on the relationship between contractual and relational mechanisms.

Contractual governance

All partners in both of the cases aimed for comprehensiveness and a high degree of precision and clarity in their formal written agreements, resulting in contracts that contain hundreds of pages and a multitude of schedules and procedures. Inevitably, both projects experienced a prolonged bidding and contract negotiation (from official invitation for tenders to financial close) phase: more than 5 years for the £150+M hospital contract and more than 3 years for the £20+M emergency services training facility. Yet despite the apparently exhaustive nature of this process, the number of subsequent significant contractual variations suggests that no matter how extensive the drafting process, any contract in such a complex exchange remains incomplete. In exploring motivations for this comprehensive approach to contractual governance, a number of explanations were evident using different frames and levels of analysis. For example, in both cases a politically motivated buyer (Lonsdale, 2005) faced increased exchange uncertainty because of the limited number of suppliers and, correspondingly, reduced ex-post control exerted by the shadow of the future (i.e. good behaviour enforced by prospects of future business). More pragmatically, as a public procurement process, there were numerous local, national and European regulatory issues that necessitated formal documentary process where a private buyer might seek an alternative ('less bureaucratic') approach. From a contract theory perspective, in addition to significant ex-ante transactional (e.g. design and service specifications) and infrastructural (e.g. financial and organisational structures) complexity, the contracting process in both cases had to accommodate a nascent supply market and the uncertainties introduced by monitoring and enforcing contracts over extended timeframes. This seems to support Williamson's (1985, 1991) assertion that the governance features of inter-organisational relationships will tend to match known exchange hazards. Indeed these 'frictional' costs (Coase, 1937) - together with the exchange-specific investments that create bilateral dependencies (Carney, 1998) - would lead a TCE analysis to conclude in-house provision or hierarchy as the optimal governance solution. In other words, the policy impetus created a context where the potential for

opportunism increased the likelihood that all parties would engage in “difficult, expensive, and often counter-productive” (Holcomb and Hitt, 2007) contracting.

#### Relational governance

Although, as the above discussion highlights, the development of both cases was substantially influenced – especially during the early project phases - by the structures of contractual governance, the role of other relational characteristics was also clearly evident. In fact, it is the approach to relational governance that marks the clearest difference between the two cases. The emergency services case suggests that trust can facilitate the negotiation and drafting of complex contracts; whereas the early phases of the hospital project were marked by a distinct lack of either inter-personal or inter-institutional trust. For the emergency services training facility, the contracting process was interpreted as a tangible expression of the openness and psychological safety (Edmonson, 1999) that had already been built up between individuals and organisations. Although both contracts involved substantial bi-lateral investment the explicit attempts to develop trust in the early phases of the emergency services project were felt to have significantly helped with sensitive issues such as benefit sharing and relationship termination procedures. Moreover, as this project moved into its construction and operations phases, there was further evidence of relational governance mechanisms, increasing information sharing and encouraging joint-problem solving – sometimes outside the framework specified by the contract. Conversely, the relationships in the hospital case – in particular during the bidding, contract negotiation and early build phases – exhibited low levels of trust, with the divergent values and strategies of the public buyer and private contractor (in particular their construction division) strongly influencing both contractual negotiations and subsequent performance management. As a result, these early project phases were characterised by ineffective information flow across the partnering organisations and an absence of personal bonding and routinized behaviour.

## **5.2. The Dynamics of contractual and relational governance**

As previously explained in the methodology section, a graphical representation of the significance of relational (RELN) and contractual (CTR) governance at different critical incidents over time was developed for each of the case studies. Fig. 4 presents a summary of the data from the hospital case and Fig. 5 presents the data from the emergency service training facility case – both based around 4 indicative critical incidents. These are intended to provide an interpretative basis for discussion of the separate and combined dynamics of these different governance mechanisms.

**[Please insert: Fig. 4 Governance Dynamics in Hospital Case about here]**

In the hospital case, the relative emphases on different governance mechanisms follow what might be considered a typical trajectory for novel exchange arrangements. At the outset, with limited inter-personal contacts between new buyers and new suppliers, relational governance was of low significance. Faced with high levels of complexity and uncertainty, all parties put a great deal of emphasis on “getting the contract right” driving up the significance of contractual governance. Over time, relationships developed through accumulation of shared experience and, more pro-actively, through events such as the relationship away days. As a result, contractual governance began to be part of a more balanced managerial portfolio (although as one interviewee noted, “I still want everything in the contract”). It is important to highlight however that the exchange had entered the operations phase by this point and in addition to the different parameters and priorities of this more collaborative and service-oriented phase, the staff responsible for the relatively short-term bidding, negotiation and design/build phases had moved on to other projects. Equally, as a benchmarking/market testing event approached (the first point when, at least in theory, the FM sub-contractor could be replaced) it seems likely the ‘shadow of the future’ was clearer and this may have created an additional supplier incentive for

collaboration. Observing the contractual and relational trajectories it is apparent that they do not follow simplistic, mirroring pattern (i.e. over time moving from contractual=high and relational=low to contractual=low and relational=high). In this case they have moved from opposing to equivalent (High/High in most recent operation phase) significance in the governance mix. These differential trajectories were also visible in the Emergency Services Case (Fig. 5).

**[Please insert: Fig. 5 Governance Dynamics in Emergency Services Case about here]**

At the start of this exchange process there was evidence of balance (Medium/Medium) between the mechanisms: the contracting process remained a crucial tool but there was also a serious and early emphasis on the relational component reflecting the efforts of two key ‘boundary-spanning’ individuals with trust in their counterparty (Fichman and Goodman, 1996; Rousseau et al., 1998). This balanced approach continued as the bid/contracting phase came to a close (High/High) and was perceived by participants as having helped to facilitate successful contract negotiation (e.g. the site search risks were taken by the preferred bidder prior to signing). After the supplier’s ‘boundary-spanner’ left the project during the build phase this inter-personal mechanism was effectively redundant (H/L). Over time, these relationships were re-built between new employees but considering the overall relational trajectory, although the significance of inter-personal trust dropped from high to low almost instantly, the reverse process appeared to be a slow sequential and incremental one. It was also interesting to note that even in this case, with far greater early emphasis on informal exchange, contractual governance was never categorized as low significance. Even during those incidents where the contract was effectively put to one side (e.g. the water pipe) to allow for rapid service recovery, there were subsequent revisions and, of course, it was only because all parties had a detailed

knowledge of the contractual arrangements that the implications of a ‘set aside’ were felt to be tolerable.

## **6. Conclusions**

Before highlighting the key conclusions derived from analysis of the case material, it is important to reflect upon the work’s limitations. Some are generic: this was an exploratory study and although established literature was used to frame the investigations, there was no formal hypothesis development or testing. Other limitations are more specific to the study. Although the PPP/PFI focus provided an empirical structure for the study, this remains a complex and controversial policy instrument and as such all opinions need to be seen through a potentially political lens. Equally, as supply markets and the policy itself have matured the ‘first wave’ projects that formed the subject of this research may be less representative of current practice. Accepting these limitations, conclusions with practical and theoretical implications emerged in three principal areas.

First, the work confirms that relational and contractual mechanisms are indeed complementary forms of exchange governance but, more specifically, relational assumptions, experiences and intentions of all parties appear to actively frame whether the contract and contracting process is interpreted as a sign of distrust or a written manifestation of commitment. In managerial terms (for a PPP/PFI arrangement) there is evidence that contractual governance capability should be seen as a crucial but not sufficient ‘qualifier’ for effective exchange and therefore needs to act in combination with proactive relational governance.

Second, the trajectories of relational and contractual governance appear to have different characteristics. There is evidence that although relational governance based upon inter-personal trust follows an incremental, cumulative trajectory it is capable of being rapidly diminished. Contractual governance mechanisms are also incremental but cannot move with the same degree of freedom (i.e. once a complex contract is constructed it doesn’t easily erode) and therefore ‘anchor’ the exchange throughout the life cycle.

This also reflects the different drivers at work: contractual mechanisms – especially in PPP/PFI arrangements – are heavily constrained by exogenous regulatory factors, whereas relational governance is much more amenable to managerial control. In terms of managerial implications, certain techniques relating to the use of boundary-spanners seem to be very effective in developing relational mechanisms.

Finally, the different development characteristics of relational and contractual mechanisms mean that their dynamic interplay does not follow consistent patterns. Although extant literature (Poppo and Zenger 2002) has already argued that contractual safeguards can support relationships in their earlier, more vulnerable phases (i.e. CTR=High/RELN=Low) this longitudinal research has found evidence of the consistent stabilising effect of contractual, even complex contractual, governance - especially given the ongoing potential fragility of (inter-personal) relational mechanisms. In managerial terms, it may be worth reflecting on the positive aspects of ongoing contractual refinements: as a basis for building and re-building trust and in extended (PPP/PFI) supply arrangements where key staffs regularly move on, as a vehicle for capturing and retaining exchange specific learning and knowledge.

## **7. Further Work**

The issues explored in this paper suggest a number of areas that would benefit from further conceptual and empirical work. Additional longitudinal research will help to illustrate whether the complementary relationships identified in these case studies are idiosyncratic or representative of more generalisable patterns. Moreover, although only a representational device in this paper, the governance dynamic diagrams appear to have great potential. Further development of key measurement constructs (e.g. for measuring both inter-organisational and inter-personal trust) would add significantly to their descriptive and prescriptive value. Building on this discussion, an investigation of the link between particular trust building techniques and exchange performance at different stages of the life cycle could yield

contingent policy and managerial insight. Finally, this research has suggested some surprising benefits from idiosyncratic and complex contracting and yet recent UK PPP/PFI projects have begun employing simpler, standardised contractual forms – in part reflecting increasingly mature supply markets. Correspondingly, the role of contractual complexity requires further critical reflection and investigation.

## References

- Baker, G., Gibbons, R., & Murphy, K. J. (1994). Subjective performance measures in optimal incentive contracts. *Quarterly Journal of Economics*, 109(4), 1125-1156.
- Baker, G., Gibbons, R., & Murphy, K. J. (2002). Relational contracts and the theory of the firm. *Quarterly Journal of Economics*, 117(1), 39-84.
- Bennett, J., & Iossa, E. (2006). Building and managing facilities for public services. *Journal of Public Economics*, 90(10-11), 2143-2160.
- Bitner, M. J., Booms, B. H., & Tetreault, M. S. (1990). The service encounter: diagnosing favourable and unfavourable incidents. *Journal of Marketing*, 54(1), 71-84.
- Blanc-Brude, F., Goldsmith, H., & Vällilä, T. (2007). Public-Private Partnerships in Europe: An Update. European Investment Bank Economic and Financial Report, 2007/03.  
<http://www.eib.org/attachments/efs/efr07n03.pdf>
- Bouckaert, G., & Halachmi, A. (1995). Reengineering in the public sector. *International Review of Administrative Science*, 61(3), 329-342.
- Broadbent, J., & Laughlin, R. (2003). Public private partnerships: an introduction. *Accounting, Auditing & Accountability Journal*, 16(3), 332-341.
- Broadbent, J., & Laughlin, R. (2005). The role of PFI in the UK government's modernisation agenda. *Financial Accountability & Management*, 21(1), 75-97.

Carney, H. (1998). The competitiveness of networked production: the role of trust and asset specificity. *Journal of Management Studies*, 35(4), 457-479

Carson, S. J., Madhok, A., & Wu, T. (2006). Uncertainty, opportunism, and governance: the effects of volatility and ambiguity on formal and relational contracting. *Academy of Management Journal*, 49(5), 1058-1077.

Confederation of British Industry. (2007). Going global: the world of public private partnerships, UK, Confederation of British Industry, July 2007, [www.cbi.org.uk](http://www.cbi.org.uk)

Chen, Y. (2000). Promises, trust, and contracts. *Journal of Law, Economics and Organization*, 16(1), 209-232.

Coase, R. H. (1937). The nature of the firm, *Economica*, 4(16), 386-405.

Dixon, T., Pottinger, G. & 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., & Wilkinson, F. (1998). Contract Law and the Economics of Interorganisational Trust. In: Lane, C., & Bachmann, R. (eds.) (1998). *Trust Within and Between Organisations: Conceptual Issues and Applications*. (146-172). Oxford: Oxford University Press.

Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44(4), 350-83.

El-Haram, M. A., Marenjak, S., & Horner, M. W. (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.

Erridge, A., & Greer, J. (2002). Partnerships and public procurement: building social capital through supply relations. *Public Administration*, 80(3), 503-522.

Ferguson, R. J., Paulin, M., & Bergeron, J. (2005). Contractual governance, relational governance, and the performance of interfirm service exchanges: The influence of boundary-spanner closeness. *Journal of the Academy of Marketing Science*, 33(2), 217-234.

- Fichman, M., & Goodman, P. S. (1996). Customer supplier ties in interorganizational relations. In Staw, B. M., & Cummings, L. L. (Eds.). *Research in organizational behaviour*, Greenwich, 18 (286-329). CT: JAI Press.
- Flanagan, J. C. (1954). The critical incident techniques. *Psychological Bulletin*, 51(4), 327-359.
- Gaski, F. F. (1984). The theory of power and conflict in channels of distribution. *Journal of Marketing*, 48(3), 9-29.
- Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology*, 78(6), 1360-1380.
- Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91(3), 481-510.
- Grimey, D., & Lewis, M. (2004). The governance of contractual relationships in public-private partnerships. *Journal of Corporate Citizenship*, 15, 91-109
- Grimshaw, D., Vincent, S., & 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.
- Gulati, R. (1995). Does familiarity breed trust? The implications of repeated ties for contractual choice in alliances. *Academy of Management Journal*, 38(1), 85-112.
- Håkansson, H., & Snehota, I. (1995). *Developing Relationships in Business Networks*, London: International Thomson Business Press.
- Hart, O. (2003). Incomplete contracts and public ownership: Remarks, and an application to public-private partnerships. *Economic Journal*, 113(486), 69-76.
- Holcomb, T. R., & Hitt, M. A. (2007). Towards model of strategic outsourcing, *Journal of Operations Management*, 25, 464-481.

- Hirschman, A. O. (1984). Against parsimony: three easy ways of complicating some categories of economic discourse. *Academy of Management Review*, 15(3), 500-513.
- Klein Woolthuis, R., Hillebrand, B., & Nooteboom, B. (2005). Trust, contract and relationship development. *Organization Studies*, 26(6), 813-840.
- Kooiman, J. (1993). *Modern governance: new government – society interaction*. London: Sage.
- 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.
- Larson, A. (1992). Network dyads in entrepreneurial settings: A study of the governance of exchange relationships. *Administrative Science Quarterly*, 37(1), 76-104.
- Leiringer, R. (2006). Technological innovation in PPPs: incentives, opportunities and actions. *Construction Management & Economics*, 24(3), 301-308.
- Lonsdale, C. (2005). 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.
- Lui, S. S., & Ngo, H.-Y. (2004). The role of trust and contractual safeguards on cooperation in non-equity alliances. *Journal of Management*, 30(4), 471-485.
- Luo, Y. (2002). Contract, cooperation, and performance in international joint ventures. *Strategic Management Journal*, 23(10), 903-919.
- Lyons, B., & Mehta, J. (1997). Contracts, opportunism and trust: self-interest and social orientation. *Cambridge Journal of Economics*, 21(2), 239-257.
- Macaulay, S. (1963). Non-contractual relations in business: a preliminary study. *American Sociological Review*, 28(1), 55-67.
- Macneil, I. R. (1978). Contracts: adjustment of long-term economic relations under classical, neoclassical, and relational contract law. *Northwestern University Law Review*, 72(6), 854-905.

- Macneil, I. R. (1980). *The new social contract: an inquiry into modern contractual relations*. London: Yale University Press.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis*. Thousand Oaks, CA: Sage.
- North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge: Cambridge University Press.
- Parker, D., & Hartley, K. (2003). Transaction costs, relational contracting and public private partnerships: a case study of UK defence. *Journal of Purchasing & Supply Management*, 9(3), 97-108.
- Parkhe, A. (1993). Strategic alliance structuring: a game theoretic and transaction cost examination of interfirm cooperation. *Academy of Management Journal*, 36(4), 794-829.
- 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*, (222-274). San Francisco: Jossey-Bass.
- Poppo, L., & Zenger, T. (2002). Do formal contracts and relational governance function as substitutes or complements? *Strategic Management Journal*, 23(8), 707-725.
- Rindfleisch, A., & Heide, J.B. (1997). Transaction cost analysis: past, present and future applications. *Journal of Marketing*, 61(4), 30-54.
- Ring, P. S., & Van de Ven, A. H. (1994). Developmental processes of cooperative interorganizational relationships. *Academy of Management Review*, 19(1), 90-118.
- Rousseau, D. M., Sitkin, S.B., Burt, R. S., & Camerer, C. (1998). Not so different after all: a cross-discipline view of trust. *Academy of Management Review*, 23(3), 393-404.
- Seppänen, R., Blomqvist, K., & Sundqvist, S. (2007). Measuring inter-organisational trust – a critical review of the empirical research in 1990-2003. *Industrial Marketing Management*, 36, 249-265.
- Teisman, G. R., & Klijn, E. H. (2004). PPPs: torn between two lovers. *EBF Debate*, 18, 27-29.

- Tranfield, D., Rowe, A., Smart, P. K., Levene, R., Deasley, P., & 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.
- The Stationery Office. (2000). *Public Private Partnerships: The Government's Approach*, London: the Stationery Office, <http://www.hm-treasury.gov.uk/media/1/6/80.pdf>
- Uzzi, B. (1997). Social structure and competition in interfirm networks: the paradox of embeddedness. *Administrative Science Quarterly*, 42(1), 35-67.
- Walder, J. H., & Amenta, T. L., (2004). Financing new infrastructures: public/private partnerships and private finance initiatives. In R. Hanley (2004). *Moving people, goods and information in the 21st century*. New York: Spoon Press.
- Williamson, O. E. (1975). *Markets and hierarchies*. New York: Free Press.
- Williamson, O. E. (1985). *The economic institutions of capitalism*. New York: Free Press.
- Williamson, O. E. (1991). Comparative economic organisation: the analysis of discrete structural alternatives. *Administrative Science Quarterly*, 36(2), 269-296.
- Williamson, O. E. (1993). Calculativeness, trust and economic organization. *Journal of Law and Economics*, 36(1), 453-486.
- Yin, R. K., (2002). *Case study research: design and methods*. Applied social research method series. Third edition. California: Sage.
- Zand, D. E. (1972). Trust and managerial problem solving. *Administrative Science Quarterly*, 17(2), 229-239.
- Zhou, K. Z., & Poppo, L. (2006). Relational contracts in China: relational governance and contractual assurance. First Annual Conference on Institutional Mechanisms for Industry Self-Regulation, February 24<sup>th</sup>-25<sup>th</sup>, 2006, Hanover, NH.

Zucker, L. G. (1986). Production of trust: institutional sources of economic structure, 1840-1920. *Research in Organizational Behavior*, 8(1), 53-111.

	Hospital	Emergency service training facility
Product-service provision	Design, build, finance and operate (DBFO). Hard (estate) and soft FM service	Design, build, finance and operate (DBFO). Emergency services training facilities and soft FM service
OJEU/OJEC advert	Mid-1990s	Late 1990s
Financial close	Late 1990s	Early 2000s
Operation since	Late 2002	Early 2003
Contract nature and value	Non-standard contract worth approx. £150M.	Non-standard contract worth approx. £20M.
Contract duration	30 years	25 years
Complexity of public-private network	1 NHS Trust as buyer; a private sector consortium comprising 3 equal equity investors, 1 investor also being a prime sub-contractor for both design; build and facility management services.	3 different local authorities as buyer; 1 contractor that is both sole investor and FM service contractor; various sub-contractors used for design and build.

Table 1. Overview of key features of hospital and emergence services training facility PFI case studies

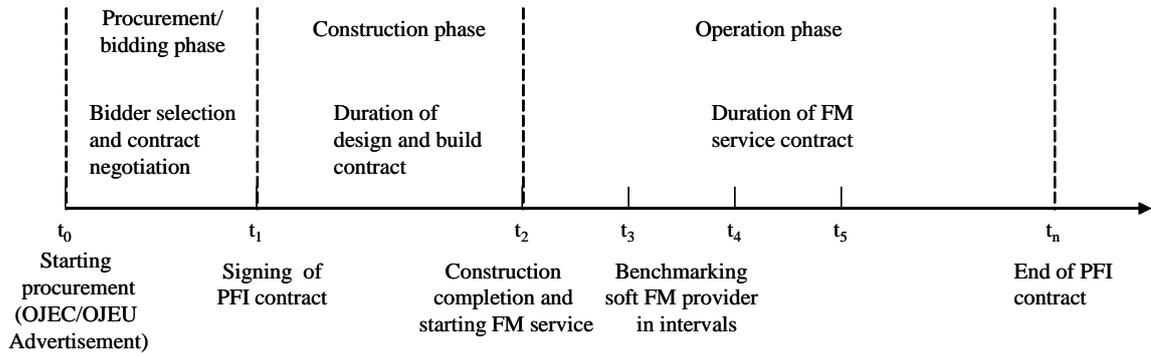


Fig. 1. Generic timeline for a PFI project (with indicative key events)

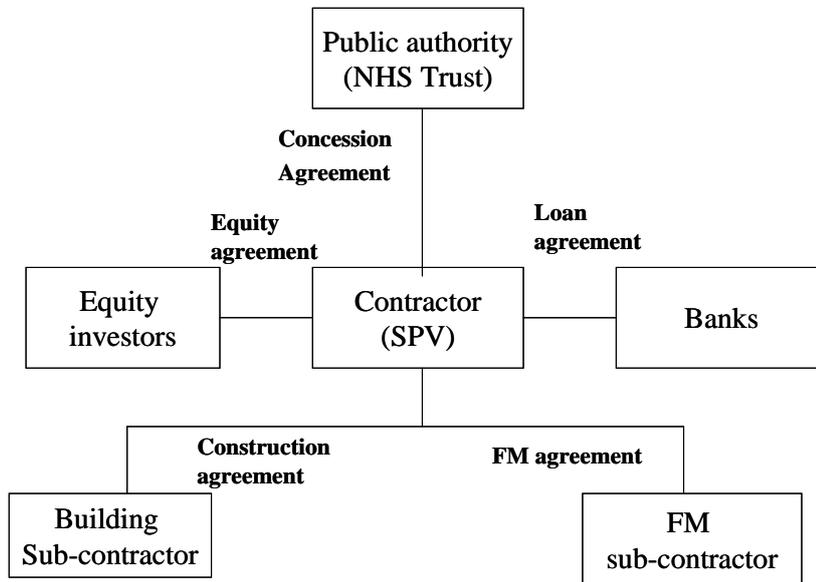


Fig. 2. Overview of hospital PFI structure

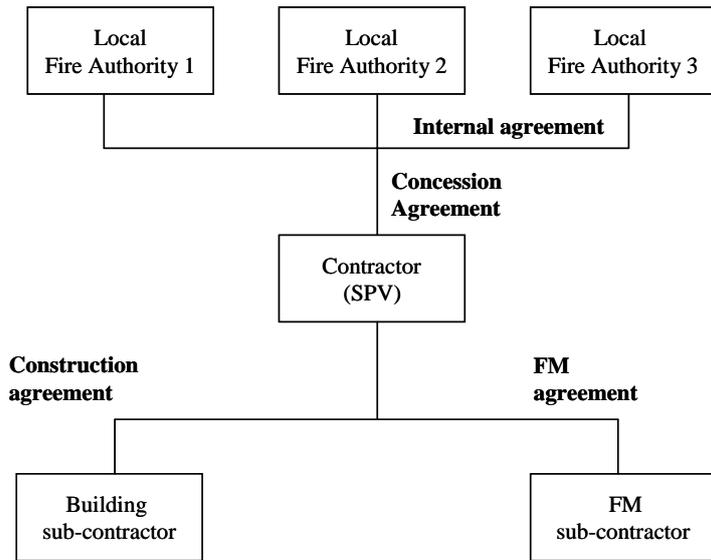


Fig. 3. Overview of emergency services PFI structure

Phase	Bid/Contract		Build		Operate	
High	CTR	CTR	CTR	CTR		CTR/RELN
Medium					CTR/RELN	
Low	RELN	RELN	RELN	RELN		
Critical Events	Tendering seminar		>430 contract changes		Relationship away days	Prepare for benchmarking

Fig. 4. Governance dynamics in hospital case

Phase	Bid/Contract		Build		Operate	
High		CTR/RELN	CTR		RELN	CTR
Medium	CTR/RELN			CTR/RELN	CTR	
Low			RELN			RELN
Critical Events	Site search (2 years)			Additional staircase	Water-pipe incident	Prepare for benchmarking

Fig. 5. Governance dynamics in emergency services case