This summarises the findings of recent research into PFI/PPP procurement duration (from 'outset' to 'financial close after construction') for educational facility projects in England, Northern Ireland and Republic of Ireland. The research was carried out using a detailed literature review, semi-structured interviews and a 'self administered' electronic questionnaire. The review examined the development of PFI/PPP and the various stages of the process as well as the contractual relationships. It also investigated key legal issues, barriers to entry/progress, risk categories and risk analysis modelling. Focus was given to educational estates and current PFI/PPP procured projects. Questionnaires were addressed to project managers employed by Education Authorities, Education Authority Advisors, SPVs and SPV Suppliers. Semi-structured interviews were also conducted. Major solutions to the acceleration of procurement included the need for training, standardisation and better planning recommendations are made concerning these. The research concludes that although educational PFI/PPP development has been slow it is set to become a more prominent feature on the Capital Investment landscape, requiring much better management by all parties involved.

Keywords: educational facilities, PFI/PPP, procurement, United Kingdom.

INTRODUCTION

PFI, the Private Finance Initiative, was born out of the need to renew Britain’s crumbling infrastructure, without a politically unacceptable increase in public borrowing. It had been assumed that where the government delivers services, such as education and healthcare, it also needs to own property. Simply, the private sector has been invited to buy existing assets or build new facilities and provide public services over a 20-30 year period. The client, a local Education Authority for example, pays an annual charge for the availability of the asset and the provision of services.

H M Treasury figures indicate that the cumulative value of approved PFI projects is now around £12 billion, about 30% of net public capital investment. PFI has been much criticised. The key complaints are that public assets are being sold too cheaply, that PFI simply pushes essential public expenditure into the future, and that it is poor value for the taxpayer because the private sector cannot raise funds as cheaply as government. Its defenders say the private sector can build and operate more efficiently and, in the current economic climate, there is no alternative if the UK is to modernise outdated facilities such as schools and colleges.

AIM AND OBJECTIVES

The central aim of this research is to investigate PFI/PPP procurement duration for educational facility projects in England, Northern Ireland and Republic of Ireland, but
primarily in Northern Ireland. The following objectives were established to measure the effective achievement of the aim outlined above:

- Establish the potential portfolio of UK educational projects suitable for development under PFI/PPP and offer a comparison to other Government Departments;
- Analyse the principal existing barriers, which threaten the development of educational facility projects procured through PFI/PPP;
- Compare the differing average procurement duration of PFI/PPP projects in England, N Ireland and the Republic of Ireland;
- Present the possible causes of disparity in procurement duration for the given locations;
- Define time saving measures that could be developed to shorten the procurement durations of PFI/PPP projects;
- Identify the utilisation of risk analysis models in educational PFI/PPP, and examine which ‘risk categories’ hold the greatest impact for efficient progression of the procurement process.

EDUCATION PORTFOLIOS & PFI/PPP PROCUREMENT

Education is claimed to be top of the Government’s agenda and is presented to the public as its number one priority. Ministers are purporting to be committed to delivering high quality learning opportunities for people throughout their lives. This requires the development of high quality facilities. In September 1997, David Blunkett, Secretary of State for Education and Employment, said:

“Raising standards in schools is at the heart of our education strategy and we cannot raise standards without a modern school environment, with the best technological equipment that a modern, forward looking nation can supply.”

There is a similar need for an up-to-date infrastructure in higher and further education. There was, historically, a conglomerate of educational buildings constructed in the late sixties and early seventies in the United Kingdom. An architectural feature in many of the school estates at this time was the extensive use of flat roofing. The problems associated with the short life cycle of this construction method coupled with the distinct lack of capital maintenance investment by the Government generally and, more specifically, the Local Educational Authorities, have accordingly resulted in dilapidated educational accommodation. Conventionally, the ‘tax payer’ would have paid for such accommodation through the public purse with the project realised under a traditional method of procurement. Armed with limited financial resources, projects were, inevitably, strictly prioritised and placed in lengthy queues, thus resulting in the accumulation of unacceptable educational provision that is abundantly in evidence today. (DfEE, 2001)

The Audit Commission (1988) brought this crisis situation into sharper focus when they predicted “a maintenance time bomb exists for publicly owned estates”; this is expected to explode circa the year 2008. Although this forecast has not been practically tested, there is no current evidence to refute it. One possibility available to the Government which could redress the situation is to procure educational estates via PFI/PPP methods. However, since the launch of the initiative in 1992, there has been
a poor effort by educational authorities in their attempt to avail of this opportunity. In 1997, the value of educational projects ‘agreed’ under PFI registered only £11 million, compared to health at £489 million and defence with some £408 million of commitment (HM Treasury 1997).

NORTHERN IRELAND EDUCATIONAL FACILITIES

The present N Ireland schools estate, which includes nursery, primary and post-primary, comprises just over 1,200 schools and is valued at approximately £2.5 billion. There is currently a backlog of major capital works valued at circa £500 million. Additionally, there is an estimated backlog in buildings’ maintenance work of approximately £90 million. (DENI,2000). The schools include both public authority schools and voluntary schools under the management of church or independent trustees. Almost 120 such schools are classified by DEL (NI) as being high priority capital projects. Sixty-one of these are primary schools with an average capital cost of £1 million; twelve special schools costed at approximately £2 million each; and forty-four secondary schools with a mean cost of £6 million.

There have also been six pathfinder educational PFI/PPP projects launched in Northern Ireland. These include the first ‘piggy backed’ schools projects in Northern Ireland. It is notable that as yet no primary school has been included in this initial wave of educational projects currently procured under PFI/PPP. All told, the pathfinder projects for Northern Ireland involve a total capital investment of circa £55 million (DENI, 2000).

Historically, in Northern Ireland further education colleges, the main providers of vocational education and adult continuing education, have been controlled by the five local Education and Library Boards. Within the last decade there have been a number of historical milestones in the development of further education in Northern Ireland, principally:

Education Reform Order which significantly changed the constitution, responsibilities and powers of the governing bodies of the colleges. Decision-making on many financial, staffing and other matters now rested with the local colleges.

1994 The number of further education colleges in Northern Ireland was reduced from 24 to 17 through a series of mergers as recommended by the Review Group.

1997 The new Labour minister responsible for education in Northern Ireland, Tony Worthington, made a policy speech on Further Education in Northern Ireland. He confirmed that there would be ‘Self–Governing’ Incorporated Status’ for Colleges with effect from 1 April 1998 under the Further Education Order 1997.

Independence essentially means that a new range of responsibility will devolve to the colleges, including financial control, personnel issues, property management and legal and insurance matters. Support areas such a marketing, quality assurance and management information systems also need development, while the college:

‘must not lose sight of its central mission to maintain and develop a relevant and effective curriculum for the community which it serves.’ DENI (1996).

The following two colleges are part of the six PFI/PPP pathfinder projects initiated in N.I.

North West Institute (L’Derry) The contract with the private sector contractor, Northwin Ltd, with a capital value £7m, was signed in August 1999. It will provide
over 25 years for 7,500 sq.ms of accommodation and related services for the North West Institute. The new building is on the Institute’s main campus and was ready for occupation in February, 2001.

B.I.F.H.E Millfield (Belfast) This contract with the private sector contractor, Northwin, Ltd capital value £19.8m, was signed in July 2000. The new building will provide, over 25 years, for 20,700 sq.ms. of accommodation and related services on the Millfield site. The target date for the occupation of the new accommodation was September 2002, and this has been achieved.

In addition to the two projects outlined above, there are two further college projects, which have recently commenced procurement under PFI/PPP;

Omagh and East Tyrone Colleges This project is to provide a new building close to or on the existing site for Omagh and a new building at Dungannon for the Dungannon Campus of the East Tyrone College. The scheme, with a capital value of £30m is being taken forward to a single ‘bundled’ project (the first for Colleges in Northern Ireland) and is currently at Outline Business Case (OBC) stage.

Springvale This project which is at an early stage, has a capital cost of approximately £70m with Government putting up £40m, the remaining £30m being raised by the University of Ulster and B.I.F.H.E. It is expected that the project board and project team will be established soon in preparation of the OBC.

PRIMARY DATA COLLECTION

At the outset, the following viable options of design and methods available for the collection of the primary data were: (1) The Case Study approach, (2) Action Research (problem-solving approach) and (3) The Survey approach.

In order to provide a definite measure of the primary objectives for the research, it was necessary to collect the necessary data by conducting surveys. The methods of surveying chosen were semi-structured interviews’ and electronic self-administered questionnaires. Personal semi-structured interviews have the advantage of being more formal than ‘unstructured’ and yet are more flexible than structured interviews. They are largely constructed on the basis of specific topics using both ‘open’ and ‘closed’ ended questions. The purpose of conducting the semi-structured interviews was to ‘scope’ the experience of representatives for educational PFI/PPP procurement so as to ascertain the relative issues involved. The respondents targeted for the semi-structured interviews were from a broad cross-section of project managers directly involved in educational PFI/PPP projects. Those targeted were representatives from:

An Education and Library Board (Pathfinder Project), A Consortium – SPV (Jarvis Ltd), Project advisors (Chesterton plc), Training Consultancy (PWC), DfEE management team.

In addition to offering the interviewer some flexibility and discretion within a semi-rigid framework, the interviews provided the opportunity to receive a ‘full sample response’ from a small yet representative population of parties involved.

The topic areas for the semi-structured interviews were dispatched to the interviewees after they were initially contacted by telephone to confirm their interest and willingness to be involved in the research. They were given time to study the topic areas to be scoped and to record preliminary answers prior to the interview taking place. Subsequently, ‘face to face’ interviews were arranged and conducted with all
except one of the interviewees. Due to the geographic location and the time constraint of the research, it was difficult to conduct a ‘face to face’ interview with the representative from DfEE in England. Consequently, a ‘tele-interview’ was held and the responses were recorded on a blank copy of the topic document by the interviewer. The results of the semi-structured interviews were used to complement the literature review and inform the content and format of the questions for the self-administered electronic questionnaire.

SELF-ADMINISTERED ELECTRONIC QUESTIONNAIRE

The self-administered questionnaire was chosen to enable a comprehensive coverage of the target population, regardless of their geographic dispersion. This provides more accurate and scientific data to be analysed for the research. ‘Self-administered’ questionnaires have the advantage of being very economic, highly efficient, and appropriate for greater consulting with colleagues by respondents. However, they do have limitations in so far as they must contain simple questions with unambiguous statements (Gill and Johnson, 1991) and there is little control over who completes them.

Naoum (1997) also highlighted the growing problem of ‘industry fatigue’ with industry facing “death by questionnaire.” This point was also made by Yin (1994), who saw the declining responses to questionnaires as a ‘compounding’ problem. On balance, however, ‘self-administered’ questionnaires provided the most suitable method for collecting the primary data required for research. It was also felt that the utilisation of modern technology to design and administer an electronic questionnaire would both enhance the advantages and diminish the disadvantages of the survey instrument.

SURVEY DISTRIBUTION AND RESPONSE

Prior to the distribution of the questionnaire, a database of project contacts was prepared. Initially, contact was made with the education authorities to obtain the necessary details of the targeted population. All potential respondents were contacted by telephone to confirm their willingness to participate and verify that they had access to the relevant technology for completion of the survey instrument.

It was decided that the respondents to the questionnaire would be at project management level. This was due to the project-specific character of some questions included in the survey instrument. A pro-forma was designed to collect the contact details of the respondents. Subsequently, the details were transferred to an electronic address book for the distribution of the questionnaire. The questionnaire was electronically mailed to twenty-seven respondents involved with eight pathfinder education PFI/PPP projects; namely three projects in England, four projects in Northern Ireland and one project in Republic of Ireland.

Some of the respondents were involved with more than one of the projects above. An electronic letter accompanied each of the questionnaires. This explained why the data was being collected, and included an instruction on how to return the completed survey instrument. Confidentiality of the respondents was also assured. This satisfied the requirements of the Data Protection Act (1984). The questionnaire, amended as a result of the pilot to clarify ambiguities and address additional issues, was distributed to the key respondents.
Questionnaires were sent to 26 respondents within each of the organisational categories. Eighteen were returned within the allotted time providing a response rate of 70%. Although this constitutes a relatively small sample size, it is important to note that the respondents are involved in more than one project concerning educational PFI/PPP. With currently only 55 signed educational projects and 12 operational; (DfEE, 2001), a representative sample size has been obtained. Of these projects, 8 of them have been surveyed for this research. It is not possible to present detailed results of the survey within the confines of this paper, but they are available in Moss (2001), and will be briefly reviewed during the ARCOM presentation. As an example, Table I summarises the views of respondents on possible efficiency measures which might shorten procurement duration

<table>
<thead>
<tr>
<th>Efficiency Measures</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>Total</th>
<th>Rank</th>
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<tr>
<td>Standardisation of internal procedures/processes</td>
<td>50</td>
<td>0</td>
<td>32</td>
<td>28</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>4</td>
<td>2</td>
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<tr>
<td>In-depth formal planning</td>
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<td>0</td>
<td>56</td>
<td>21</td>
<td>12</td>
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<td>Development of new financial arrangements</td>
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<td>0</td>
<td>21</td>
<td>12</td>
<td>50</td>
<td>8</td>
<td>3</td>
<td>0</td>
<td>0</td>
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<td>3</td>
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<tr>
<td>Clearer Contractual arrangements between partners</td>
<td>40</td>
<td>0</td>
<td>8</td>
<td>21</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>15</td>
<td>4</td>
<td>0</td>
<td>94</td>
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<tr>
<td>Willingness to accept reasonable risk</td>
<td>30</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>42</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>87</td>
<td>5</td>
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<tr>
<td>Formal Training of Staff</td>
<td>0</td>
<td>0</td>
<td>40</td>
<td>14</td>
<td>6</td>
<td>15</td>
<td>0</td>
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<td>Formal review of past experience</td>
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<td>16</td>
<td>6</td>
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<td>Stronger project leadership</td>
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<td>0</td>
<td>16</td>
<td>7</td>
<td>24</td>
<td>0</td>
<td>8</td>
<td>6</td>
<td>8</td>
<td>0</td>
<td>69</td>
<td>8</td>
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<td>Recruitment of Specialist/Advisors</td>
<td>20</td>
<td>0</td>
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<td>0</td>
<td>6</td>
<td>0</td>
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<tr>
<td>Other(s) (please specify)</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>12</td>
<td>42</td>
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</tbody>
</table>

**SUMMARY OF ANALYSIS**

The analysis concludes that almost 67% of project managers in educational PFI/PPP procurement have been in post for less than six years. 40% of Education Authorities, as organisations, did not have previous PFI/PPP experience. Furthermore, 60% of respondents had no previous PFI/PPP experience and 40% of them had not received any formal training. All of those who had not received training, felt that it would have been beneficial.

The results show that training in ‘Project Management Skills’ is the most important. All respondents surveyed are committed to more than one project. It was found that the degree of impact on a project manager’s ability to work efficiently depends largely on the category of employment. The findings also highlight that organisations should standardise internal procedures and processes to aid project efficiency.

Northern Ireland education PFI/PPP projects are taking on average 160% more time to close when compared to those in England. The figures suggest a great deal of room for improvement. The causes for overrun were numerous and smack of ‘partner apathy’. On average, the tender cost as a percentage of total project cost is 5.4% for the projects surveyed - twice that reported by Birnie. (1999). 67% of respondents claim their organisations are experiencing a ‘culture shock’ as a result of educational PFI/PPP procurement.
Government, and Industry as a whole, must prioritise further standardisation of contracts and overall processes. ‘Poor Business Case’ and ‘Lack of Planning’ are viewed as the biggest barriers to entry and progress within this PFI/PPP sector. Almost a third of respondents are known not to have employed risk analysis modelling.

Evidence suggests that contractual and financial risks remain the biggest thorn in the side of educational PFI/PPP procurement. Finally, respondents have highlighted the need for larger projects (and greater ‘deal flow’), far-reaching standardisation and better planning before projects are brought forward.

CONCLUSIONS

In conclusion, there are approximately 24,000 schools in England, 1,200 in Northern Ireland and 800 in the Republic of Ireland. Additionally, there are some 500 colleges across all three areas. Despite the considerable size of the estate, only approximately 55 PFI/PPP projects have reached financial closure and as yet only 12 are operational. This includes all three geographical areas surveyed.

The research has also shown that the average procurement duration from approval to financial closure is 75 weeks for educational PFI/PPP projects in England. No literature on these statistics was available for Northern or Southern Ireland at the time of the review. However, the primary research of this study has established that an average procurement duration of a staggering 195 weeks presently exists in Northern Ireland and 57 weeks in the Republic of Ireland. Projects in the Republic of Ireland have not run over programme as yet.

The findings also concluded that a project manager’s ability to operate efficiently and effectively while employed on multiple projects is dependent on which of the contract parties he works in. Some 60% of Education Authority and SPV respondents felt that working on multiple products had a very adverse impact upon their ability to work efficiently. Considering measures which organisations could employ to make educational PFI/PPP procurement more efficient, respondents were of the opinion that standardisation of the internal procedures and processes would have the greatest effect. This underpins the fragmented nature of firms as discussed by Langford & Male (2001). Findings also conclude a need for a much more detailed and formal approach to planning for educational PFI/PPP projects. Significantly, 100% of educational projects surveyed in N Ireland, had overrun on the planned procurement duration, with some being as much as 100 weeks over time from business case to financial closure of construction. In exploring causes for overrun, a level of apathy appeared to exist among the partners. This in itself would have detrimental impact for the procurement duration.

Although no strong statistical association exists between the respondent categories in respect of level of change due to PFI/PPP procurement, it must be concluded that a ‘culture shock’ is being experienced by the organisations. Furthermore, there was a consensus of opinion that Government and the Construction Industry must do more to achieve greater standardisation for the overall process and the contract itself. The findings were also conclusive in identifying ‘Poor Business Case’ as the single biggest barrier to entry and successful progress in educational PFI/PPP projects.

With regard to risk, it was concluded that ‘contractual’ and ‘financial’ risk were the two biggest factors to be considered. Upon the investigation of risk analysis modelling, it was established that almost one third of the respondents either did not
employ a risk analysis model or they were not sure. Fortune & Lees (1996) found only 15% of project managers claimed to have knowledge of risk analysis models. There is a need for strategic training in this regard.

RECOMMENDATIONS

Considering the conclusions drawn on the findings of this research, as outlined above, it is proposed that the following recommendations are implemented in a bid to provide greater efficiency and effectiveness for educational facility PFI/PPP procured projects. It is also anticipated that they will benefit all parties involved, particularly the project managers who are charged with the responsibility of successfully managing the process.

Establishment of a PFI/PPP Educational Advisory Board consisting of a ‘cross-border’ panel to service both Northern and Southern Ireland.

A comprehensive ‘sector specific’ training needs analysis in respect of all personnel employed within the procurement process.

Revision of training policies to realise a more iterative approach to training delivery whereby certain training programmes are mandatory ie Project Management Skills & Risk Analysis Modelling.

Government to more vigorously pursue greater standardisation of contractual agreements (eg operating manuals implemented to inform partners of their detailed responsibilities under contract).

Education Authority project managers to have single PFI/PPP project responsibilities.

Education Authorities should sponsor a senior school member to liaise with service provider for the duration of the procurement phase.

Establishment of larger bundled school projects and greater deal flow within the sector.

A thorough investigation into the formulation of the Public Sector Comparitor and true Value for Money (VFM) in Educational target PFI/PPP procurement of educational facilities.

LIMITATIONS OF RESEARCH AND FURTHER STUDY

The findings of this research have provided evidence to determine that currently only fifty-five educational PFI/PPP projects have been signed, with twelve operational. Hence the current sample is relatively small. This is particularly true for Northern and Southern Ireland where collectively only eight projects are signed and two operational.

However, educational facility PFI/PPP is a largely untapped market. Current Government announcements suggest that such projects are set to become a more prominent feature on the Capital Investment landscape.

Consequently, opportunities for future research in this area and the ability to test the findings for improved procurement performance will grow.
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