1. Introduction

Today's global population explosion, improved information and communication system, ease of travel and public awareness seem to bring about a spiral increase in demand for public services. Governments across the globe are continuously finding it difficult to fund such a spiral increase of demand, especially in the developing and emerging economies. This has resulted in the public sector having to look to the private sector for the funding of projects such as prisons, hospitals, schools, roads, water supply and other infrastructures.

There are a variety of concession and partnership agreements. Some of the most commonly used are Private Finance Initiative (PFI) and Public/Private Partnership (PPP). The advantage of these two methods of procurement is that almost all the risk lies with the private sector, which therefore ensures project delivery and compliance to international standards. The involvement of the private sector in the delivery of public services and infrastructure is not new, and has been taken forward in many different ways. The appropriate implementation models (procedural, legal and financial) is necessary for a full take-off. The framework for such models may vary from nation to nation due to varying constraints and risks associated with each economy. This paper therefore focuses on identifying the key risks and constraints in the Polish environment with a particular reference to the implementation of PFI/PPP.

The following forms of Public-private partnerships (PPP) are currently been used widely in Europe, depending upon the type of project, its size and complexity:

- Service contract, where the government awards a private party the rights and obligation to perform a specific service, within well-defined specifications and period. Government retains ownership and control of all facilities, capital assets and properties.
- Management contract, where responsibility and control over a departmental function is transferred to the private party who is generally not expected to invest in the facility.
- Lease, where the private party becomes the asset manager and operator of an existing publicly owned facility and pays a specified lease payment to the government. The operator collects the authorised tariff and earn profit but not expected to invest in facility improvements.
- Concessions, where the private party takes over all the aspects of facility management and operation from the government, often on a long-term basis. The private party’s responsibilities include maintenance and specified rehabilitation and capital investment in facility upgrades and enhancement. The private party is fully responsible for raising the required capital. These may take the form of build-operate-transfer (BOT), build-operate-own (BOO) or build-own-operate-transfer (BOOT), design-build-operate-transfer (DBOT), design, build, finance and operate (DBFO). Other less common
variants include BRT or BLT (build rent/lease and transfer) and BTO (build transfer and operate).

- Private Finance Initiative (PFI), a concept where the private-sector provides the Government or a local authority a complete scheme or a project that the Government would be interested in. The private party fully funds the development and operates it for an agreed period, and the services produced are to be purchased by the government or other stakeholders under agreement reached for a specific period.

There have been contradictions in literature in the definitions or differences between PFI and PPP. D. Hickman [8] considers PFI as the same to PPP, while others suggest that PPP is a mechanism for implementing the PFI concept.

The basic idea of PFI is to transfer the appropriate risk away from the public sector onto the private sector, whilst harnessing what the Government view as superior management skills from the private sector. Consequently the Government gains huge benefits compared with traditional procurement routes, by increasing value for money, better innovation and providing sufficient savings [8, 10].

The use of PFI as a procurement system requires the set up of a Special Purpose Vehicle (SPV), which is basically a consortium made of up different entities with different knowledge and expertise. One key shortcoming of governments and private organisations in the Accession EU countries is the lack of managerial and technological expertise. If SPVs are to include local organisations, transfer of this expertise and quality from advanced countries to the poorer countries can be enhanced throughout Europe. Figure 1 shows a typical set-up of a PFI scheme.

**Advantages of PFI/PPP**

A recent research by PriceWaterhouseCoopers (October 2001) on 27 PFI projects based in UK have revealed the following advantages of PFI/PPP projects:
They offer high quality facilities and infrastructure; other capital procurement initiatives such as partnering are bringing about improvements, but none has shown such a dramatic effect on delivery as PFI/PPP. Other approaches are still resulting in delays, cost overruns and/or compromises on original proposals.

They offer better quality in design and construction; PPP/PFI deliver better build quality than traditional procurement, because it does not constrain the private sector’s initial capital investment.

They try to give realistic estimates of whole-life cycle approaches; the PFI model passes responsibility for long term risks of maintenance and asset replacement to the private sector. As a result the private sector carefully considers the whole-life cycle (WLC) cost consequences of their design and construction proposals.

Better innovation and competition; in the design and construction of facilities, new ideas from the private sector are adding value to PFI. Because there is competition involved between the private sector consortia’s a large number of ideas and competitive designs is achieved.

PPPs’ are flexible; because there are different contractual arrangements within the procurement of PFI at the tactical level, such as BOO, BOT, BOOT, etc there is an amount of flexibility by the Client (Government or Local Authority) to decide which contractual arrangement should adopt within this new initiative.

The public sector develops a more disciplined and commercial approach.

Refinancing of a project from the consortium’s point of view can be achieved, although it is likely to be shared with the public sector.

The disadvantages of PFI

The PFI has some important implications for the construction industry and presents many challenges to construction contractors, irrespective of their size. J. Ezulike et al [7] have identified the following as barriers to entry into a PFI projects by the contractors:

High participation costs; - when bidding for a PFI project, a consortium has to deal with a variety of issues relating to contracts, construction, design, finance, low-operation maintenance and management. Since many contractors and their consortia lack these specialists, external advisors are employed and as a result raising the financial costs to very high levels.

High project values - the majority of projects under the PFI are larger than those for which many small contractors can realistically aspire to bid.

High Risk; - in PFI many risks such as those associated with design and construction, commissioning and operating, technology and obsolescence, regulation and project financing, are transferred to the private sector. This is in stark contrast to conventional construction projects, where the construction risk and the design risk, are the only ones to remain with the contractor.

Demands and management time – bidding for PFI projects is intensive on management time, more so than bidding for conventional construction projects. Most of the above issues can be seen as disadvantages of PFI procurement route.

Life cycle cost (LCC) estimates can result to negative estimates during the operational stage of the project leaving the consortium facing financial losses instead of revenues. This can be seen to take effect from the early stages of prediction of LCC due to the fact that it is very difficult to make decisions at the feasibility stage relating to the WLC of a proposed building because is inherently risky, as the future is uncertain. Logic dictates the longer the period of time accounted for, the greater the risks involved, and therefore the less accurate calculations are likely to be.
On a face value, the advantages seem to outweigh the disadvantages especially on the part of the public sector due to increase in quality standards, innovation, zero capital funding, and value-for-money.

2. Project funding

Another important factor in PPP and PFI projects is funding. Like risk it is a crucial part of system and also distinguishes the different types of PPP e.g. PFI is totally private funded but other concession contracts such as BOT systems may vary. The funding of developments can be categorised into public, corporate and project funding, as follows:

**Public Finance:** For years, many governments, including developing countries such as the South African government, funded projects by using existing surplus funds or issuing debt (government bonds) to repay over a specific period. However, governments have increasingly found this funding to be less attractive, as it strains their own balance sheets and therefore limited their ability to undertake other projects. This concern has stimulated the search for alternative sources of funding.

**Corporate finance:** This is where the private sector participant uses its own credit for raising the funds, due to its capacity and the limited size and nature of the project. This option is often used for shorter, less capital-intensive projects that do not warrant outside financing. Private companies avoid this option, as it strains their balance sheets and capacity, and limits their potential participation in the future.

**Project finance:** Project financing uses the project’s assets and/or future revenues as the basis for raising funds. Generally, the sponsors create a special purpose, legally independent company in which they are the principal shareholders. The newly created company usually has a minimum equity required to issue debt at a reasonable cost, with equity generally averaging between 10% and 30% of the total capital required for the project. Individual sponsors often hold a sufficiently small share of the new company’s equity, to ensure that it does not become a subsidiary for legal and accounting purposes.

3. Risk in PFI/PPP

The implementation of PFI/PPP across the world may vary due to the varying levels of risks and constraints. Risk can only be allocated once it has been identified and quantified in terms of a good and detailed risk management plan. Risk must be considered over the whole of the project life cycle. From the literature search [1, 3, 4, 6, 9] the following have been listed as the common risks in PPP/PFI schemes:

**Availability Risk:** This is the risk that the services provided by the private sector party may fall below the standard required by the public sector client. The risk is borne by the private sector company and contract conditions will penalise the private sector provider should a problem occur [4].

**Completion Risk:** This also includes construction and design risk and generally results in time and/or cost overruns that will require a substantial increase in capital and/or interest expenses during construction. It may be attributable to weather, labour strikes or late delivery of equipment and supplies [3].

**Construction Risk:** The PFI will seek to place the construction risk with the bidder. There may be some limitations of risk due to events outside the control of the parties; however, any limitations are likely to be few. Any defects within the construction will need to be rectified by the bidder, an important point for those putting together a team to bid on a project. The contractor within the team will not want defects in the building to impact on the relationship
with others in the consortium. Funding banks may require contract monitoring on their behalf to minimise likely problems during the operational phase. Defects will impact negatively on investment value and on the ability of various parties to dispose of their interest in the project [3].

**Technical Risk**: There is a range of technical risks to be factored into bid calculation. While the PFI seeks to encourage innovation, in a technical context there is a bias against the use of new products or procedures if these have not been thoroughly tested. The risk areas are not unrelated to each other and construction and technical specification must work together. A bidder may build to a higher initial standard in the hope of reducing maintenance costs [3].

**Revenue Risk**: The revenue risk is associated with all the areas in the contract that relate to payment. Payment may be reduced because public sector demand for the services decreases; this is a volume risk. There is also an availability risk, given the need to make a specified type and amount of accommodation available to certain standard for occupation and use [3].

**Tax Risk**: Tax risks are categorised into two groups. The first group comprises tax changes that occur while a project is being developed. Tax risks themselves that occur after project construction or during operation comprise the second grouping. These tax risks are subcategorised into three areas. The first is the introduction of a new tax or, less likely, the removal of an existing tax. The second relates to changes in tax rate for a particular tax, e.g. the VAT rate on fuel payments being increased. The third area is an action that leads to a tax being paid [3].

**Political Risk**: There is always a political risk with a contract that is to last in the region of 30 years. The risk can be minimised, but not eliminated. PFI/PPP projects are being explored in other countries where the political risk may well be different [4].

**Contract Risk**: Unfortunately parties do default on contracts, sometimes deliberately, sometimes through little or no fault of their own. The contract structure will attempt to cover all circumstances and to provide a means by which the agreement operates. There is a risk that these provisions may be called upon. There is a further risk that a different legal interpretation may be put on the contract clause than that which the parties envisaged [4].

**Currency Risk**: Currency risk is, to large extent, a part of the construction and operating risk of the project. South African PPP laws and regulations require all PPP projects to be denominated in Rand (South African currency). This will automatically shift the risk from the project to the product or service. Currency risk occurs when the revenue or turnover and expenses (operating or interest) of a project are in different denominations. Foreign investors will generally use their primary operating currency in determining the Internal Rate of Return (IRR) or Net Present Value (NPV) of a project [4].

**Technology Risk**: This risk refers to the possibility of changes in the technology resulting in the services being provided with sub-optimal technology. This risk is difficult to control. However, when better technology decreases the cost of providing the services, the private sector provider will almost certainly implement such changes [4].

4. **The constraints affecting PFI/PPP procurement in Poland**

The concept of PFI and PPP can be universal, but the implementation may be dependent upon the social, cultural, financial, political and economic environment. The most variable of the environmental envelopes in EU countries are the social, cultural and political. For any private organisation to get involved in any PFI project from one EU country to another, it is paramount that the constraints that originate from these environmental envelopes are carefully analysed.
In Poland, one of the major constraints is lack of a fully developed legal framework that permits foreign contractors to work and operate in the country. There are some important constitutional and legal issues that need to be reviewed in more detail before PFI/PPP procurement can be fully implemented in Poland. It is essential that firm strategic decisions be made as to whether or not further legislation is required before projects are advertised. In some countries such as China the legislation is drafted in general terms to provide a high level framework, and specific powers are granted by means of further statutory instruments or secondary legislation. In other countries the legislation is specific e.g. the New Roads and Steelworks Act in the UK, roads laws in Bulgaria or concession laws in the Philippines, France and Germany. What seems to happen in Poland is that there is no specific legislation on concessions and the Constitution is silent on the subject. Generally if the public sector wishes to carry out a project in partnership with private investors, there may be some specific Public Procurement legislation that may provide for appropriate delegation of rights to a tender board to deal with government contracts and to let these contracts within the specified public sector procurement rules.

Some of the accession countries such as Cyprus have relaxed their policy on foreign investment, administrative procedures have been simplified to allow foreign investment in special purpose vehicles set up for the purposes of investment in projects. The process to set up companies with potentially up to 100% foreign participation will need to be simple and effective.

Legislation covering the following issues will need to be further investigated:

- The ability of non-resident foreign companies to repatriate capital, profit, dividends and interest arising from direct investments in PFI projects;
- The rules under Company Law relating to acceptable levels of foreign investment and whether it is possible for a special purpose vehicle to be created with two or more foreign investors, or with foreign ownership of shareholdings offshore. From May 2004 fewer controls may exist in relation to investors from EU member countries;
- All factors (including ‘double taxation’ treaties) which may inhibit the sensible and efficient structuring of a project vehicle by bidders, and the extent to which there are obstacles beyond permits/approvals from the Central Banks.

Registration of foreign Contractors may have an implication. Foreign contractors carrying out construction activities within Cyprus require permits (Article 16 Registration of Contractors Law 1992), and any limitations on the ability of contractors to obtain the necessary permits are barriers that investors often like to do without.

Other constraints that exist within the construction environment may include:

- Lack of strategic managerial skills in the local contractors' organisations,
- Lack of local experience & expertise in such projects by the public and private sector,
- The cultural environment of the country in respect of its business approaches e.g. the tendency for expectations to be raised only for frustration and disappointment to be aired in the media when contracts are slow.
- Other general constraints may include:
- Most small to medium construction companies are family owned businesses with varying corporate cultures and sometimes using unique or non-standardised business approaches. For changes to occur, management training to will be necessary.
- The influence or political power of trade unions within the business environment may be a constraint if poorly managed.
- The lack of PPP/PFI experience and expertise in the Government. This also indicates the need for training of government officials.
High level of corruption in the construction sector

5. Conclusion

The concept of partnership between the public and private sectors to provide traditional public services is rapidly growing in both the developed and developing nations around the world. Governments are looking for a balance between government and private funding and provision of public services. The paper has identified 3 types of funding arrangements and the project finance option is suggested to be the most favoured. The 10 major categories of risks have been identified, which may be considered to be universal or generic but their effect and allocation may be dependent upon the type of project and its location. The paper also outlined the advantages and disadvantages of PFI. Although the concept of PFI/PPP can be universal, the paper has suggested that the implementation process may be varied due to the influence of social, cultural, financial, political, legal and economical constraints. These constraints can be exacerbated by the lack of standardised legal and financial frameworks within the various countries.

The paper has identified the key constraints in Poland and can be summarised as follows:

- The ability of non-resident foreign companies to repatriate capital, profit, dividends and interest arising from direct investments in PFI projects,
- The rules under Company Law relating to acceptable levels of foreign investment and whether it is possible for a special purpose vehicle to be created with two or more foreign investors, or with foreign ownership of shareholdings offshore,
- Obstacles beyond permits/approvals from the Central Bank,
- Foreign contractors carrying out construction activities within Poland require permits and any limitations on the ability of contractors to obtain the necessary permits are barriers that investors often like to do without,
- Lack of internationally recognised managerial skills in the local contractors,
- Lack of knowledge and experience in such projects in both the public and local private sectors,
- High level of corruption in the construction industry,
- The influence of trade unions and the media,
- Most small to medium size construction companies are family owned businesses with varying corporate cultures and sometimes using un-standardised business approaches.

This research has indicated that there are substantial opportunities for private investments in public services in Poland, especially with its joining of the EU. The environment seems to have limited constraints and risks compared to other Accession EU states or developing nations in some parts of the world. Poland is ‘strategically’ important within the global economy because of its geographical location as the gateway to Eastern Europe.

References

FINANSOWANIE PRZEDSIĘWZIĘĆ W SYSTEMACH PFI/PPP, RYZYKO I OGRANICZENIA IMPLEMENTACJI BUDOWNICTWIE

Streszczenie

Unia Europejska zachęca rządy państw akcesyjnych do poszukiwania alternatywnych sposobów finansowania budowy obiektów infrastruktury (m. in. lotnisk, autostrad, oczyszczalni i zakładów utylizacji odpadów, rurociągów). Badania wskazują, że systemy finansowania PFI/PPP, angażujące sektor prywatny, są przedmiotem zainteresowania wielu państw, w tym Polski. Liczne doświadczenia [7] z implementacji tych systemów dowodzą istnienia wielu ograniczeń warunkujących efekty ich zastosowania. Celem opracowania jest wyłonienie potencjalnych zagrożeń wykorzystania tych systemów finansowania przedsięwzięć w wybranych państwach UE, szczególnie w Polsce. W artykule przedstawiono część wyników badań, realizowanych w ramach większego programu badawczego, którego celem jest opracowanie założeń systemu realizacji przedsięwzięć budowlanych w Polsce w oparciu o system finansowania PFI/PPP.