

# **Public Private Partnerships in Health Care**

**European PPP Models and Factors Influencing the Positive Outcome  
of Such Ventures**

MASTER THESIS
---------------

In partial fulfillment of the requirements  
for the degree

„Master of Arts (MA)“

Master Program  
**„International Health Care Management“**  
Management Center Innsbruck

Supervisor:  
**Stephen Wright**

Author:  
**Joseph Yan Siroky**  
**1100360905**

## ABSTRACT

A number of European countries are turning to private finance for public hospitals and other healthcare infrastructure. Public-private partnerships (PPP) are intended to bind private sector efficiencies, secure appropriate risk transfer between hospital operators, infrastructure owners and other partners, and ensure optimum whole-life asset management. This paper discusses the different factors that influence significantly the outcomes of European PPP ventures, the scope of different PPP models, and experience so far in delivering new infrastructure and stimulating innovation and quality improvements. Finally, it draws conclusions, through recent case studies, on the factors that have a significant influence in shaping PPP models and policies. The methods used were extensive literature research and analysis, further supported by case study analysis of the Pembury Hospital, Braga Hospital, Berlin Buch Hospital and De La Ribera Hospital. The outcome of this paper draws upon the concept of “bundling” of services and concludes that this may be seen as a way of providing more appropriate risk allocation that creates incentives for efficient and effective behavior of the private sector.

Key Words: Public Private Partnerships, PPP, Contracting, Bundling, Healthcare, Europe

## DECLARATION IN LIEU OF OATH

I hereby declare, under oath, that this master thesis has been my independent work and has not been aided with any prohibited means. I declare, to the best of my knowledge and belief, that all passages taken from published and unpublished sources or documents have been reproduced whether as original, slightly changed or in thought, have been mentioned as such at the corresponding places of the thesis, by citation, where the extent of the original quotes is indicated.

The paper has not been submitted for evaluation to another examination authority or has been published in this form or another.

---

Innsbruck, May 28<sup>th</sup> 2012

## TABLE OF CONTENTS

<b>LIST OF FIGURES.....</b>	<b>VI</b>
<b>LIST OF ABBREVIATIONS.....</b>	<b>VII</b>
<b>ACKNOWLEDGEMENTS .....</b>	<b>VIII</b>
<b>1. INTRODUCTION.....</b>	<b>1</b>
1.1. PROBLEM.....	1
1.2. AIM.....	2
1.3 DEFINITIONS.....	2
1.3.1 WORKING DEFINITION.....	4
1.4 STRUCTURE OF THE THESIS .....	4
<b>2. BACKGROUND.....</b>	<b>5</b>
2.1. PPP VERSUS NORMAL PROCUREMENT.....	5
2.2. WHY PARTNERSHIPS? .....	6
2.3 ADVANTAGES AND DISADVANTAGES OF PPP .....	9
2.3.1 ADVANTAGES/BENEFITS .....	9
2.3.2 DISADVANTAGES/RISKS .....	10
2.4. PERCEIVING PPPs.....	13
2.4.1. FROM THE EYES OF THE PUBLIC .....	13
2.4.2. FROM THE EYES OF THE GOVERNMENT .....	14
2.5. ORIGINS OF PPP .....	15
2.6. OVERVIEW OF RECENT PPPs IN THE WORLD .....	16
2.7. INCREASED PRIVATE INVOLVEMENT.....	17
2.7.1. OUTSOURCING NON-CLINICAL SUPPORT SERVICES .....	18
2.7.2. OUTSOURCING CLINICAL SUPPORT SERVICES .....	18
2.7.3. OUTSOURCING SPECIALIZED CLINICAL SERVICES .....	18
2.7.4. PRIVATE WING.....	19
2.7.5. PRIVATE MANAGEMENT AND LEASE .....	19
2.7.6. PRIVATE FINANCING, CONSTRUCTION AND LEASEBACK .....	19
2.7.7. PRIVATE FINANCING, CONSTRUCTION AND OPERATION.....	19

2.7.8. PRIVATISATION BEYOND THE HOSPITAL .....	20
2.7.9. SUMMARY OF MODELS .....	20
<b><u>3. CONTRACT THEORY .....</u></b>	<b><u>21</u></b>
3.1. TRANSACTION COST ECONOMICS .....	21
3.2. WHOLE OF LIFE CYCLE COSTING AND CONTRACTING .....	27
3.2.1. LIFE CYCLE COSTING .....	27
3.2.2. WHOLE-OF-LIFE CYCLE CONTRACTS .....	28
3.3 VALUE FOR MONEY .....	29
3.4. BUNDLING .....	30
3.4.1. SPECIAL PURPOSE VEHICLE (SPV) .....	31
<b><u>4 PPP MODELS AND CASE STUDIES .....</u></b>	<b><u>33</u></b>
4.1. PFI – ACCOMMODATION ONLY .....	33
4.2. JOINT VENTURE (JV) – INFRASTRUCTURE AND CLINICAL SERVICES .....	36
4.3. HOSPITAL FRANCHISE .....	40
4.4. FULL SERVICE – HOSPITAL PLUS COMMUNITY .....	42
4.5 INSIGHT FROM THE HACIRIC RESEARCH .....	46
<b><u>5. CONCLUSION .....</u></b>	<b><u>47</u></b>
<b><u>BIBLIOGRAPHY .....</u></b>	<b><u>50</u></b>

## LIST OF FIGURES

Figure 1. Table showing per capita spending on health per country	7
Figure 2. Top ten countries with the largest PPP/PFI finance deals 2004	17
Figure 3. Market Transaction Costs versus Internal Capacity	22
Figure 4. Value For Money Calculation	29
Figure 5. An example of a private sector consortium in the form of an SPV	31
Figure 6. Case studies and their respective PPP models including remuneration methodology – in relation to the increase in bundling.	33
Figure 7. Generic Timeline for a PPP/PFI Project	35
Figure 8. Joint Venture Arrangements	37
Figure 9. Full Service Hospital + Community	42

## LIST OF ABBREVIATIONS

BOO	Build Own Operate
ClinCo	Clinical Services Company
DBFO	Design Build Finance Operate
DBOM	Design Build Operate Maintain
DCF	Discounted Cash Flow
DG	Directorate General
DRG	Diagnosis Related Group
ER	Emergency Room
EU	European Union
FM	Facilities Management
InfraCo	Infrastructure Company
IPPR	Institute for Public Policy Research
IT	Information Technology
JV	Joint Venture
LCC	Life Cycle Costing
NFB	Non Financial Benefit
NPV	Net Present Value
OJEU	Official Journal of the European Union
OOP	Out-of-pocket
PBP	Payback Period
PFI	Public Finance Initiative
PPP	Public Private Partnership
PSC	Public Sector Comparator
SPV	Special Purpose Vehicle
TCE	Transaction Cost Economics
TVM	Time Value of Money
VFM	Value for Money
WLCC	Whole of Life Cycle Contract

## **ACKNOWLEDGEMENTS**

This thesis paper could not have been written without the help and support of my supervisor Stephen Wright. His keen involvement and guidance have been very motivating, and his expertise was greatly appreciated.

My gratitude also extends to Mag. Dr. phil. Vladan Antonovič, BA, PhD for his help with administrative and organizational matters.

Innsbruck, May 2012



## **1. INTRODUCTION**

### **1.1. PROBLEM**

With an increasingly ageing population and increasing costs of healthcare, European states are looking more and more towards innovative strategies to help them finance and fulfill their duty of providing healthcare to individuals. According to the European Policy Centre, in the next 20 years, the number of Europeans aged over 65 will rise by nearly 40%. (European Policy Centre, 2012) The demographic, epidemiological and technological changes will increase demand on current health systems and healthcare provision, and increase pressure on social security systems.

States face budgetary challenges and, especially with today's austerity measures that are taking place on a global scale, it is clear that they will be looking to reshape their healthcare systems in order to be more efficient in both cost and clinical terms. One such potential way forward is through Public Private Partnerships (PPP) as a new type of provision of healthcare facilities and/or services. Contractual infrastructure-based arrangements between the state and private actors have existed for centuries (for example, in private road construction) but formalising these as "PPP" has been relatively recent. Further, extending PPP from the 'economic' sectors like transport to 'social' ones like health or education is still more novel, and has required developing new forms of arrangements (Garvin & Bosso, 2008).

PPPs come in various forms and models. Hospitals and healthcare are one area where differing degrees of private participation can be achieved. PPPs involving the construction and management of hospitals for public use can, in principle, introduce innovative ways to control costs and improve services within existing health systems. (Grimsey & Lewis, 2004)

Given the long-term approach of PPPs, the key is to develop risk sharing mechanisms that enhance the returns to both the public and private sector (Barrows, Macdonald, & Harvey-Rioux, 2011). PPP projects have been implemented in various countries; however, it is essential to look at the

underlying factors, including the alignment of incentives through rising levels of responsibility, - that have made these projects a success, or otherwise.

## **1.2. AIM**

The goal of the thesis is to search for the significant factors that have influenced Public Private Partnership projects in the European Healthcare sector. The focus will start with the existing literature and then look at some specific case studies and models where the Public Private Partnerships seem to be working.

The research question stands as follows:

Can contractual collaboration for defined infrastructure related services between the public and private sector, as is the case in Public Private Partnerships, lead to greater efficiency and effectiveness in delivering care to patients? If so, what are the main factors that can be found to form the basis of successful Public Private Partnerships? In particular, is the extent of “bundling” of services and estate a core mechanism to align incentives and improve outcomes?

## **1.3 DEFINITIONS**

Even though the term PPP is widely used and accepted, it still is understood in differing ways and therefore the term needs to be clearly defined within the scope of this paper. As a rule of thumb, a PPP must contain a minimum of three ingredients; a private entity or firm, a public entity, and a common goal of creating social value.

According to the Institute for Public Policy Research (IPPR), a PPP is defined as

*“a risk-sharing relationship between the public and private sectors with the objective of bringing about a desired public policy outcome”* (IPPR, 2011) .

Nevertheless, given that PPP projects are essentially established via a long-term contract, it is indispensable for the definition to include this mention (otherwise “outsourcing”, which does not encompass the mutual commitment of true PPP, would be involved). Another interesting definition that comes a bit closer is given by the German PPP Task Force:

*“PPPs are aimed at increasing the efficiency of infrastructure projects by means of a long term collaboration between the public sector and private business. A holistic approach which extends over the entire lifecycle is important here”.* (German Transport, Construction and Housing Ministry, 2008)

Another important aspect to look at in establishing the appropriate definition in our case is the financial exposure. Standard and Poor's definition of a PPP *“is any medium-to-long term relationship between the public and private sectors, involving the sharing of risks and rewards of multisector skills, expertise and finance to deliver desired policy outcomes”* (Standard and Poor's, 2005) .

Another even more precise financial definition of a PPP, highlighting the financial commitment, would be the following:

*“PPPs are long-term partnerships to deliver assets and services underpinning public services and community outcomes. Optimal structuring links private sector profitability to sustained performance over the long term, yielding robust and attractive cash-flows for investors in return for delivering better value for money to the tax payer”* (John Laing plc, 2005).

Efficiency is a desired outcome that should stem from the partnership and is well captured in the definition from the European Commission:

*“A PPP is a partnership between the public sector and the private sector for the purpose of delivering a project or service traditionally provided by the public sector. It recognizes that both sides have certain advantages, and by allowing each to do what it does best, public services and infrastructure can be provided in the most efficient manner”* (European Commission Directorate General Regional Policy, 2003).

The working definition of a PPP for the purpose of this paper should include all of the above aspects. It must have a clear long-term approach, it must include a risk sharing approach by both parties, it must pursue a common goal, it must be beneficial for both parties whether it is profit for the private sector or value for money for the public sector, it must involve financial exposure, and it certainly must increase efficiency. If we were to combine all of these characteristics into one definition, the outcome would be a working definition that looks like this:

### **1.3.1 WORKING DEFINITION**

**A PPP is a long-term partnership between the public and the private sector whose goal is clearly defined and whose outcome, through the sharing of risks and rewards, is beneficial for both the public and private sector. The purpose of the partnership is to deliver public infrastructure and services in the most effective and efficient manner that would bring about greater value for money for the tax payer.**

### **1.4 STRUCTURE OF THE THESIS**

The thesis is structured into several sections in order to provide a systematic approach for understanding healthcare PPPs in Europe.

Section 2 examines the background of PPPs in terms of comparability to traditional procurement methods. It continues with the origins, and leads on to introduce the reader into how PPPs evolve in the health care sector based on private sector involvement. This is provided through an extensive research of current literature.

Section 3 provides detailed information about the contractual and relational aspects of PPPs. This is combined with several economic theories such as Transaction Cost Theory and Life Cycle Theory. The idea of bundling is introduced and serves as an underlying concept in providing an understanding as to the alignment of incentives and risk transfer. This section draws upon current literature.

Section 4 examines case studies that reflect the bundling concept. It draws its information from recent case studies as well as academic literature.

Finally, section 5 concludes with a summary of factors that influence the outcome of PPPs.

## **2. BACKGROUND**

### **2.1. PPP VERSUS NORMAL PROCUREMENT**

In the last twenty years, the infrastructure development setting has changed drastically with ever increasing involvement of the private sector in the provision of healthcare services and healthcare infrastructure. Between 2005 and 2009, the UK alone recorded 34 new health PPP projects (Kappeler & Nemoz, 2010). Additionally, for the EU, in the year 2010 a total of 16 health related PPP projects came to a financial close and another 5 for 2011 (European PPP Expertise Centre, 2012).

Conventional public and PPP procurement methods have very significant differences. The way that these projects are managed have an effect on the efficiency, cost and VFM (Value for Money) - quite apart from the impact on care provision and its quality - , and therefore it is necessary to be able to distinguish clearly between them. There are two main linked differences. The first is in the way the specifications or outcomes of the project are to be viewed; either through output specifications or input specifications. The second is a shift in the state's perception of its role; from owner of assets to purchaser of services.

Under normal procurement methods, the government sets what it wants in terms of inputs, and then manages, controls and oversees how the project is delivered and ultimately how the consequent services are delivered to the public. (Bennett & Iossa, 2005) This approach has the government involved in many parts of the project; design, financing, building, operating and maintaining.

However, under a PPP, it is the government's role merely to specify the service output that it requires. The output in the healthcare sector takes the form of a basic service standard – of estate or medical services - that the government wants to be provided to the public, and as of that moment it is the private firm or consortium that takes the project into their own hands. The private firm therefore has control rights as to how to deliver the expected service to the public. (Bennett & Iossa, 2005) In essence, the firm becomes the project manager and with effective property rights, and can therefore act autonomously to provide infrastructure and services that are expected to be more efficient in the long run.

The second main difference reinforces this change of control, in that the public sector ceases to own (some) assets. Instead, it contracts only to buy services produced by capital stock held on the balance sheets of other parties. The public sector's concern becomes entirely related to the quality and cost of the services it buys, and not at all the physical capacity that someone else owns.

## **2.2. WHY PARTNERSHIPS?**

When one considers the effort necessary to maintain a successful partnership, why would anyone bother? This is especially true when we consider the mistrust that can exist between the private and public sector when working together in the health sector. Nevertheless, there are three major reasons that PPPs have become a key strong point in healthcare (Mitchell, An Overview of Public Private Partnerships in Health, 2000). They are:

- a change in philosophy as to what roles the public and private sector should play in healthcare;
- an acknowledgment by both the private sector and the public sector of their interdependence;
- an improved understanding as to how both parties can gain substantially through the partnership.

In the past, the European healthcare sector was divided between public and private provision. The two sectors operated largely independent of each other and the thinking was that the public sector caters to the poor whilst the private sector was elite and seen as affordable for only the wealthy. However, this is an inaccurate representation of reality since, according to the World Health Organization and the following chart (World Health Organisation, 2000), on a world scale it is often the poorest countries which rely heavily on the private sector to provide them with services.

	<b>GDP</b>	<b>per capita spending on health</b>	<b>% of health expenditures that are private</b>
<b>Bangladesh</b>	<b>\$270</b>	<b>\$13</b>	<b>54.0%</b>
<b>India</b>	<b>\$390</b>	<b>\$23</b>	<b>87.0%</b>
<b>Pakistan</b>	<b>\$490</b>	<b>\$17</b>	<b>77.1%</b>
<b>Indonesia</b>	<b>\$1110</b>	<b>\$18</b>	<b>63.2%</b>
<b>Philippines</b>	<b>\$1220</b>	<b>\$40</b>	<b>51.5%</b>
<b>PNG</b>	<b>\$940</b>	<b>\$36</b>	<b>22.4%</b>
<b>China</b>	<b>\$860</b>	<b>\$20</b>	<b>75.1%</b>
<b>Thailand</b>	<b>\$2800</b>	<b>\$133</b>	<b>67.0%</b>
<b>Malaysia</b>	<b>\$4680</b>	<b>\$110</b>	<b>42.4%</b>
<b>Korea</b>	<b>10,550</b>	<b>\$700</b>	<b>62.3%</b>
<b>Vietnam</b>	<b>\$320</b>	<b>\$17</b>	<b>80.0%</b>
<b>Singapore</b>	<b>\$32940</b>	<b>\$876</b>	<b>64.2%</b>
<i>source: WHO: World Health Report 2000 (figures for 1997)</i>			

Figure 1. Table showing per capita spending on health per country.

Given the above facts and the change in philosophy, many people who have before been in favour of an entirely public approach to healthcare are now much more inclined to consider the private sector. Many find that the private sector is on the way to forming a more integral part with the public sector of provision in health, and PPPs can be seen to make the entire system more effective (Savas, 2002).

Furthermore, the current state of the economy and public indebtedness for many countries has led to them rethinking their strategy in terms of the use of their resources. They are being forced to look for innovative ways to provide health services to their citizens. The PPP can be seen as an answer to budgetary difficulties but also against managerial difficulties of the state in operating healthcare facilities.

Importantly, economic theory suggests that there is no difference whether the public sector borrows to finance a project and then repays the debt or whether the private sector borrows and the public sector repays the debt. The only difference is in the distribution of costs – in which case a PPP creates a long-term repayment schedule which can be more easily provided-for in a state's budget (OECD, 2006).

With PPP, the state is changing its position from owner of assets to user of services provided by others. The provision of services to the state can be done without having the burden of owning large costly assets such as hospitals (Batan, Essig, & Schaefer, 2005).

The old thinking of systematic state intervention cannot be supported anymore, if only as a result of the difficulties that the public sector is currently facing. The principal argument in favour of these partnerships is that they constitute for the state a way to take advantage of capital and expertise provided by the private sector, in order to fulfill the initiatives that would have otherwise been too costly (Yana, 2005).

Consequently, the increased spending on healthcare and the greater deficit brought by current public hospitals compel more and more governments to implement cost cutting measures in the health sector. It is important to understand that never before have the needs in the healthcare sector been greater but the resources available more and more limited. It is often said that health does not have a price; however, it most certainly has a cost, and that cost weighs heavily on states and their ability to manage the sector efficiently.

In order for the state to ensure the provision of public services of best quality at the lowest cost, PPPs propose to integrate the activities of parties with differing interests but on common projects and thus to use as well as is possible the core competencies of the different parties in order to manage the risks and to share the common benefits. In this respect, PPP ideally creates a very tightly linked collaboration between the private sector and the public sector. This also leads both sides to share the responsibilities, set through a long term contract. On the one hand, through the PPP, the private sector frees the state from the heavy financial burden of immediate lump sum investments and the risks that are linked to heavy investment projects. We must not forget that the financial burden is in this case spread over a long period of time, as the payments by the government are done over the life-cycle of the project. On the other hand, the availability of private financing reduces the need for states to borrow further, in the short term, and to increase their budgetary deficits (Savas, 2002).



## **2.3 ADVANTAGES AND DISADVANTAGES OF PPP**

### **2.3.1 ADVANTAGES/BENEFITS**

Partnering with the private sector on healthcare projects can yield benefits to the public sector and within that also to the health sector. Needless to say, benefits of this cooperation also arise in the private sector; ultimately, it is the goal of the private sector to get a return on its investment. Certainly, it can be assumed that the private sector would not get involved otherwise, since the majority of PPPs considered here are carried out by profit-making commercial companies. Even though, some places such as Scotland have seen even not-for-profit companies/charities get involved in PPP provision, notably in the education sector (Scotsman.com, 2008). Therefore, the next section will focus primarily on the risks and benefits that accrue to the public sector when engaging in PPP.

The potential advantages or benefits that arise include reduced lump-sum government spending where the government is not put in a position where it has to supply large up-front investments, especially in today's reality of scarcity when it comes to public funds. Certainly, it is important to note that this case holds true only under the assumption that the markets ignore the fact that the government is still under contract to make payments over the life-cycle of the project. The second important benefit is a potential increase in efficiency brought by the private sector due to its greater expertise which is transferred to the project through its operational efficiency. The third benefit which is closely linked with the latter is greater effectiveness in terms of healthcare management, which translates to better management of hospital services and infrastructure (Nikolic & Maikisch, 2006). In addition, the partnership brings about a sharing of expertise, whether it is technical or management, and can lead to technological improvements, which when all put together can lead to a greater quality of services.

When speaking about risk, it can be allocated to the party which knows best how to manage it; or it can be allocated to the party with the least risk aversion. In the maximum scenario, the risk is fully transferred to the private sector though, almost universally, it is in fact shared between private and public sectors. Nevertheless, the important thing here is that it is no longer only the public sector

which bears all the risk, albeit that it pays something for the transfer to the private sector. In that sense, the PPP is a major way forward in order to allocate risk efficiently, and in any event reduce the burden on the public sector (Hayford, 2006).

### **2.3.2 DISADVANTAGES/RISKS**

There are several types of risk that need to be taken into account and that need to be addressed appropriately. They can be categorized into fiscal risk, and contractual risk and situation-specific risk. Nevertheless, both former risks are inadvertently linked together because the way to mitigate such risks can mainly be done through proper contractual provisions.

#### **FISCAL RISK**

Let us firstly look at fiscal risk and how it is defined. *“Fiscal risks could be defined as deviations of fiscal outturns (deficits, debt/GDP) from expectations at the time of the budget and/or other fiscal forecasts”* (Velloso, 2009). If we relate this to the PPPs in healthcare, the deviations as mentioned above usually happen when there is an unforeseen event that pressures the government to act and inject more resources (for example extra financing) than expected at an impromptu time. This leads to a deficit and therefore can be seen as a fiscal risk. This type of scenario can occur because of the fact that the public sector has a duty of keeping public services running once they start operating. This means that if something goes wrong within the PPP, before any legal action can take place, the public sector will try to avoid service disruptions and hence will do what is necessary to continue current operations. Ultimately, this could be the case in which the private sector tries to improve its bargaining position. Furthermore, one could argue that the government’s ability to accept and assume risk is virtually infinite, arguably because it can always tax the population (Montero, 2007) – through current financial market circumstances are shaking this belief. In other words, in an entirely private contractual venture, the shift or deviation in risk allocation may disturb the balance of risk which can lead to devastating effects for one of the two private parties, but in a PPP the public sector will always assume a critical position in emergency situations where it will do whatever is necessary to maintain running operations in the public health sector.

In situations where the partnership agreement stipulates a buy-back or transfer of the asset at the end of the long-term contract, the residual value could be considered a risk because of the fluctuating market price of the asset and its financial valuation. Given the huge investment that was required at the beginning for the construction of the facilities, the potential for loss can be very large. It is important to consider this aspect in the contract and to find contingencies for mitigating this threat. Special provision must be agreed upon in order to insure that neither party ends at a disadvantage.

Possible mitigating factors for fiscal risk are better fiscal planning, budgeting and accounting. What this means is that the standards for budgeting and accounting need to be strengthened. The process should be further scrutinized through independent audits which would require full accounting and fiscal transparency from all parties. On the public side, the government should have set maximums that it can reach in terms of its exposure to fiscal risk. A possible extension of this idea is for the public sector to have contingency plans where a certain amount can be set aside in order to have a so called liability fund (Laursen, 2006).

### **CONTRACTING RISK**

Now, as for contractual risk, let us first look at its definition. Simply put it is the “probability of loss arising from failure in contract performance” (BusinessDictionary.com, 2012). In other words, when one of the parties does not fulfill his obligations, he therefore puts the other party at a disadvantage given that it is a zero sum game.

A possible way of managing contracting risk is through provisions that stipulate clearly the division of responsibilities and roles of each individual party in the contract. It is crucial for the whole process to be as transparent as possible. Transparency will lead to exposure of misaligned incentives which can lead the private sector to opportunistically look for possibilities of asset-stripping or rent-seeking (Nikolic & Maikisch, 2006). Rent-seeking in this particular case could be the private sector looking to obtain economic gains through dishonest manipulation of the contract provisions without returning the social benefit to society (Investopedia, 2012). As for asset-stripping, the situation arises when a private sector company believes the PPP deal to be undervalued by the public

sector (Investopedia, 2012). The transparency should not only be kept to the actual contract itself, but should also be present throughout, beginning with the bidding process and extending to the contract. The important factors for a private firm to consider before entering into a partnership are the risks and rewards, and it is imperative that through transparent communication, all information be laid out and that proper methods of project evaluation be used. These methods must be agreed upon by both parties and must be realistic in order to limit the extent to which the public sector could transfer unmanageable risk to the private partner or vice versa (Nisar, 2006). It is worth recalling that a contract which unnecessarily burdens the private sector is probably not, despite initial appearances, a good bargain for the public sector (since there is an unacceptably large probability of the project going wrong).

### **SITUATION-SPECIFIC RISK**

Situation specific risk relates to risk that is attributed to the specific area one is dealing with. Since our case relates to healthcare facility projects, one could firstly see a potential for construction risk. This type of risk can relate to problems in terms of design of the facility, whether it is a new construction or renovations to an existing building, to possible additional expenditures during the construction of the building, and to possible delays to part or the whole project (delays have cost implications).

Secondly, availability risk relates to the indirect pressure that is always felt by the public sector due to the fact that they are responsible for the constant provision of the service. In other words, if there is non-fulfillment of the contract by the private sector, from a citizen's view, the ultimate responsibility will still reside with the public sector in order to make available the services that the citizens require, with the appropriate quality and continuity.

Thirdly, demand risk must be taken into account as this relates to the dynamic system of healthcare in which there is changing demand in terms of healthcare services. This requires constant adaptability depending on the situation, and in order to maintain efficiency of the facility. The partnership must be strong enough to counter and balance any greater demand in services or to find innovative ways to make use of facilities if over supply would be present and thus allow the facility

to run at maximum efficiency. In many PPP models (such as the UK's Private Finance Initiative, PFI), there is almost no overt demand risk on the private partner, apart from minor incidentals such as car park revenue. Other models, however do involve the private sector assuming some of the market risk in terms of the number of patients using the facility. Also, even where demand risk is not borne by the private partner, it is borne by the public sector, so needs to be understood.

## **2.4. PERCEIVING PPPS**

### ***2.4.1. FROM THE EYES OF THE PUBLIC***

The view from the eyes of the public is quite divided overall. It can be more so in certain countries than others. Nevertheless, the subject itself is controversial because PPPs are present in many different sectors and are therefore affected by the media which often pools all types of PPPs from all different sectors into one basket. Certain PPPs versus others are more publicized, more present, more visible, and differ in cost, therefore it is often difficult for the public to be able to distinguish and objectively assess each type of PPP. It is difficult to look at PPPs in general and to apply a general consensus to a specific type of PPP such as in healthcare. Nevertheless, the following paragraphs will try to elaborate the differing views of PPPs amongst the public and try to centre on the topic of healthcare.

A survey was done in Canada between the years 2004 and 2008 on public opinion of PPPs in that country. This was done by the Canadian Council for Public Private Partnerships, in which 2000 Canadians were asked if the government should join forces with the private sector in the form of PPPs in order to deliver infrastructure and services (The Canadian Council for Public Private Partnerships, 2012). The questions that were asked related to the general state of the country's infrastructure, the general opinion about PPPs, and which sectors would benefit most from PPPs. The survey found that 87% of Canadians believe that the government is lagging behind satisfying the demand for new or improved public services and infrastructure. In 2008, 61% of respondents believed that it is time to use PPPs to address the service and infrastructure

deficit. This result was almost identical with 2004 when 60% answered in this way. The results vary within the country, and most in favor were respondents from the provinces of Quebec, Atlantic and Prairie Provinces, British Columbia and Ontario. As for the sectors that are most favoured for the application of PPPs, the non-health hospital services, roads, and recreation facilities ranked at the top.

Another different survey in 2006, showed yet again that the majority of respondents were in favor for their government to place the provision of health services to the private sector through a PPP (British Columbia Medical Association, 2012).

#### ***2.4.2. FROM THE EYES OF THE GOVERNMENT***

The public sector sees PPPs as an innovative approach that shows promising results (European Commission Directorate General Regional Policy, 2003). Within the healthcare sector, relatively few governments have experience with PPPs, but for those that do have experience, the general underlying reasons for committing to such projects are the following (Ministry of Industry and Trade of the Czech Republic, 2011):

- Additional capital – governments look for new sources of capital, given the need for constant reinvestments into the current public service infrastructure. This need is further stressed by recent economic developments which pursue pathways that are more economically viable than was previously possible through traditional procurement mechanisms.
- Know-how – The government understands that its primary function is to provide access to quality healthcare. Therefore it sees PPPs as a more appropriate alternative in providing for better management and implementation of core processes that will ultimately fulfill the objective of providing access to quality healthcare.
- Added value – the PPP aims at providing added value to the public through the understanding that when both the private sector and the

public sector work together, they utilize their own comparative advantages in the best way possible to create synergies and best outcome scenarios. Consequently, the PPP focuses on using resources in the most optimal way and for the longest duration given the standard long-term outlook.

Essentially, governments have the main responsibility of insuring proper governance, access to healthcare services and education, insuring law and order, and secure proper infrastructure. Yet they are aware that often their delivery method is not optimal. Thus they turn to PPPs to carry out the delivery through professionally managed private sector expert organizations who would take on the risk and be held fully accountable for each euro spent (Kamath, 2001).

## **2.5. ORIGINS OF PPP**

PPPs have not appeared out of nowhere. Some types of the instrument date back many decades or longer as, for example, toll roads. More recently, they owe their origin to the state's perceived loss of legitimacy and poor management skills when it reaches its limits as to how well it can provide services to the public. The systematic intervention of the state in the market, inflation, the increasing debt of central governments, and the deterioration of the economy have led to limitations as to how the state handles its public infrastructure (Hearne, 2009).

The reduction of the role and the size of the state, dictated on the one side by financial constraints and on the other by the neoliberal ideologies of the 1980s, have brought many governments to consider putting their focus on deregulation and the initiation of policies to limit state intervention. It was during the 1980s that the general population started realizing the extent to which the public administration was considered as less effective, not very budget conscious, bureaucratic and poor managers, as opposed to the market and private firms which have always been trying to push for greater efficiency and cost effectiveness, but without sacrificing quality (Hearne, 2009).

In essence, it was the politics of Thatcher in the UK and Reagan in the US that paved the way for privatization and also for PPPs. In essence, the justification to turn to the private sector for financing and capital was due to the state in which

the economy was in. But it was not until the arrival of John Major who succeeded Thatcher in 1990 that PPPs actually took off in the UK under the name of Public Finance Initiative. PFI started off in helping finance and build public infrastructure without placing a heavy burden on the public purse. The key to deciding on use of PFI as a financing and procurement instrument - was the Value for Money (VFM) approach (Yana, 2005): the idea that the private sector could deliver infrastructure services cheaper across the life-cycle than the public sector using traditional methods.

## **2.6. OVERVIEW OF RECENT PPPS IN THE WORLD**

Over the last twenty to thirty years, certain countries have seen an ever increasing use of PPP as a way of providing a public service. Many of these countries have experimented with PPPs in different sectors ranging from transportation, water treatment, solid waste management, courts, museums, defence assets, hospitals, private prisons and schools.

The following table shows the financial value of closed deals for the top ten most involved countries in terms of PPP. These are across all sectors, and not only related to healthcare or the provision of healthcare services, but it gives an overview as to how PPPs are becoming ever more prominent in recent developments around the world. The data, though six years old, is only used to illustrate the latter point.



<b>Rank 2004</b>	<b>Country</b>	<b>Value US\$m</b>	<b>Deals</b>	<b>% Share</b>	<b>Rank 2003</b>	<b>Value US\$m</b>	<b>Deals</b>	<b>% Share</b>
<b>1</b>	<b>UK</b>	13,212	81	32.6	<b>1</b>	14,694	59	56.7
<b>2</b>	<b>Korea</b>	9,745	9	24.1	<b>3</b>	3,010	3	11.6
<b>3</b>	<b>Australia</b>	4,648	9	11.5	<b>7</b>	611	4	2.4
<b>4</b>	<b>Spain</b>	2,597	7	6.4	<b>2</b>	3,275	8	12.6
<b>5</b>	<b>US</b>	2,202	3	5.4	<b>4</b>	927	2	3.6
<b>6</b>	<b>Hungary</b>	1,521	2	3.8	<b>11</b>	251	1	1.0
<b>7</b>	<b>Japan</b>	1,473	15	3.6	<b>10</b>	274	5	1.1
<b>8</b>	<b>Italy</b>	1,269	2	3.1	<b>5</b>	714	3	2.8
<b>9</b>	<b>Portugal</b>	1,095	2	2.7	<b>n/a</b>	n/a	n/a	n/a
<b>10</b>	<b>Canada</b>	746	3	1.8	<b>n/a</b>	n/a	n/a	n/a

Source: Dealogic, (OECD, 2006).

Figure 2. Top ten countries with the largest PPP/PFI finance deals 2003 and 2004.

## 2.7. INCREASED PRIVATE INVOLVEMENT

The idea that private involvement may lead to greater efficiency is not new. Furthermore, the same can be said about the private sector being considered more efficient when it comes to building construction, maintenance and operation. However, what is new is the idea of bridging the public and private sector in order to make use of these greater efficiencies. PPPs emphasize VFM over the life of the building, not only the cheapest first or capital cost, and they promote a focus on whole of life cycle costing implications (Grimsey & Lewis, 2004).

When it comes to hospitals, private participation can be seen at a number of levels, ranging from providers of simple outsourcing services to fully integrated partnerships dealing with complete provision. In the following part, we will look at different levels of involvement of the private sector (Taylor & Blair, 2002).

#### ***2.7.1. OUTSOURCING NON-CLINICAL SUPPORT SERVICES***

When it comes to outsourcing non-clinical support services to the private sector, it basically means that the private sector will take on the job of catering, building maintenance, security, cleaning, and laundry, to name a few examples. The private firm is in charge of employing the number of necessary individuals to perform these tasks. In other words, these employees are not public servants but are directly employed by the private firm. As for the public sector in this case, it continues to provide all the clinical services within the hospital and is in charge of hospital facility development and management overall. It also is in charge of staff within the hospital that are not linked to the outsourced services.

#### ***2.7.2. OUTSOURCING CLINICAL SUPPORT SERVICES***

In this case, instead of the public sector providing “all” clinical services, it still provides true clinical services, less a few support services which have been outsourced. Therefore the private firm will in this case take over some of the support services such as radiology and laboratory for example. Nevertheless, the public sector still manages the main facility.

#### ***2.7.3. OUTSOURCING SPECIALIZED CLINICAL SERVICES***

In this case, the private firm is asked to fulfill a more specialized role instead of a purely support role. The private firm will take-on the job of providing services, within the hospital, that require specific know-how, but that are nonetheless more or less routine procedures. Examples can include cataract removal and lithotripsy. Such procedures are often carried out on an outpatient basis and therefore do not require any overnight stay at the hospital. The risk of complications is usually rare. Once again, the public sector still manages the hospital and provides most of the clinical services.

#### **2.7.4. PRIVATE WING**

In this case, the private firm operates a private wing either within the hospital itself or beside the hospital. This private wing is therefore only for private patients, paying either via voluntary health insurance or out-of-pocket. This can be in the form of accommodation services and/or complementary clinical services. In this case the public sector manages the hospital for public patients but in parallel it makes a contract with the private firm for sharing certain joint costs, overhead costs, in certain cases staff and equipment.

#### **2.7.5. PRIVATE MANAGEMENT AND LEASE**

At this stage, the private sector intensifies its involvement to the extent that the public sector starts to play a minor role in the provision of services and in terms of management. The private firm takes over the management of the hospital under contract with the government/public sector. It is in charge of providing the non-clinical services, but also clinical services. It may employ all staff. Depending on the type of contract, the private firm can be in charge of providing newly needed investment over time. On the other hand, the public sector simply remunerates the private firm for the services it provides. It consequently makes sure that the terms of the contract are respected and that the standard to which both parties have agreed is fulfilled.

#### **2.7.6. PRIVATE FINANCING, CONSTRUCTION AND LEASEBACK**

The private developer finances and constructs the hospital. The public sector makes phased lease payments as it does not own the newly built public hospital. Nevertheless, the public sector is the one which manages the medical side of the hospital, as the duty of provision of clinical services still lies with the public sector. The classic example of this is the UK's Private Finance Initiative, and this has turned out to be by far the dominant PPP model across Europe.

#### **2.7.7. PRIVATE FINANCING, CONSTRUCTION AND OPERATION**

In this circumstance, the idea is to incorporate the full operations in the contract. In other words, the private sector has the responsibility of financing, constructing,

and operating the hospital on behalf of the public sector, but also to provide the clinical and all non-clinical services. In this case, the public sector does not own, does not manage, does not provide services, but instead it pays the private firm for capital costs and also for costs relating to the services provided. This is also sometimes called “franchising”. In some cases the private sector merely carries on running a facility bought from the public sector, and in the other case it will effectively buy a license but will need to construct some or all of the facilities. The only link to the public sector is that the public sector must monitor the services provided, and regulate them

#### **2.7.8. PRIVATISATION BEYOND THE HOSPITAL**

This last model extends the envelope of services beyond the hospital, to include “community” services such as primary and specialized care. This is a novel concept currently being primarily evaluated in Spain. It places responsibility on the private sector for managing the healthcare provision of an entire area and its population. Details pertaining to this model are discussed in Section 3.4.4.

#### **2.7.9. SUMMARY OF MODELS**

As one can see, there are many different possibilities, and the above list is not exhaustive. The different possibilities depend on many factors; whether the private firm owns or leases the facility, manages some or all of the medical services, whether it employs the staff, and whether it is in charge of any future capital investments and upgrades to the current facility. On the other hand, it is important to note that the public sector (the government) will base its decision on other factors such as: the needs of the community for increased services, its own ability to oversee and effectively control and regulate the provision of services and quality of private firms and of course the view of the public on the need of reforms in healthcare and what role the government should play in this context (Grimsey & Lewis, 2004).

The other issue with increased private involvement stems from the debate as to whether private firms should be kept in roles relating to ancillary services or whether they should be included in core provision such as secondary or even more so, primary care.

### **3. CONTRACT THEORY**

#### **3.1. TRANSACTION COST ECONOMICS**

Transaction cost economics (TCE) deal with three things when it comes to PPPs. The first one has to do with the costs of searching for the best or most suitable private partner. This means that it includes costs associated with the tendering process which can often be very long depending on the size of the project. The second point deals with the costs of drafting a “bullet proof” contract that would presumably contain all the clauses, provisions, and terms and conditions that would leave no space for any unforeseeable events – hypothetically speaking (so-called “complete contracts”). The third point deals with costs that have to do with the monitoring of the contract to see whether both parties abide by the pre-agreed rules and costs of sanctioning and compelling the parties to carry-out their duties or responsibilities (Coase, 2005).

The following figure shows an adapted version of the “make” or “buy” relationship depending on the market transaction costs of establishing a PPP contract and the internal capacity of the public sector to complete a project using traditional procurement methods (Parker & Hartley, 2003).

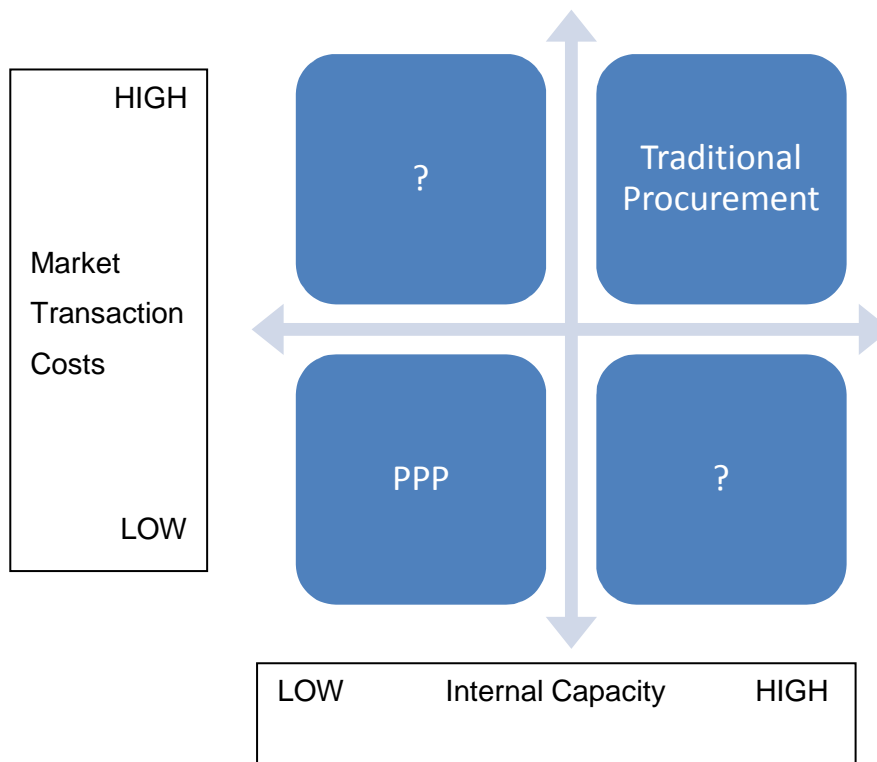


Figure 3. Market Transaction Costs versus Internal Capacity

Source: Adapted from (Batan, Essig, & Schaefer, 2005)

From the above figure it can be seen that the public sector is better positioned to use traditional methods of procurement as long as it is judged to have the proper internal capacity to handle the project and when the market transaction costs are higher than what could be viable in order to return a positive VFM under a PPP. A clear answer also holds in the case of choosing a PPP over traditional procurement. The decision to choose PPP is appropriate as long as the public sector has low internal capacity to manage the project in comparison to the private sector whose know-how and ability to manage risk is higher. Furthermore, if transaction costs are low, engaging in a PPP should help achieve a positive VFM and to reach greater efficiency in initiating the project – thus saving time and money.

As for the two question marks, the internal capacity and transaction costs are in conflict, and it is not clear as to what the best possible solution could be (recognizing that the matrix depends on judgement concerning valuation on the

two axes anyway). The situation needs to be more carefully analyzed and costs and benefits need to be weighed in order to choose a best outcome. If one chooses to go ahead with a PPP, there is always the choice of matching the type of PPP to the project and thus achieve a most optimal outcome. For example, if the transaction costs are high and internal capacity is low, then a possible solution would be to use a PPP that would more simple and incorporate fewer services - such as hospital accommodation only - and thus keep the contractual agreement relatively less cumbersome.

When we think of contracts that are made between the public and private sector, there is a danger of one side having an advantage over the other because of information asymmetry. In other words, when both parties agree to a contract, it is usually done in conditions of imperfect information and one of the two parties could correspondingly try to exploit his or her information advantage in the transaction. This is also sometimes referred to opportunism, which is described by Williamson as “the incomplete or distorted disclosure of information, especially to calculated efforts to mislead, distort, disguise, obfuscate or otherwise confuse” (Williamson, 1985, pp. 47-48). Opportunism can become a serious threat under circumstances where large dedicated assets are involved such as buildings (a hospital, for example), which is known in contract theory as “asset specificity”. The assets and the associated investments have little or no other use outside the actual contractual matter and thus this leads both parties to become bound to each other as in a situation of bilateral monopoly. Both parties have no other option than to work together (Walsh, 1995). Contracts are not optimal due to the imperfect or asymmetric information. This can lead one party to exploit his advantage, leading to a situation of “hold up”, described later. It is worth bearing in mind that, even if both parties believe they understand contract contingencies, the third party adjudicator of any conflict (usually the courts) will find this much more difficult.

The difficulty lies with writing a contract that could include all possible events (contingencies) that one ultimately cannot foresee. The uncertain events can cover a very broad scope. Consider for example the length of the contract. It spans for many decades, often 25-30 years. This is a long period of time when many things can happen. There are virtually endless possible scenarios.

Technologies can change during that time; there may be a need to update the equipment or purchase new apparatus. There may be a need for expansion and therefore costs can fluctuate greatly. Also, the state of the economy within the country or even internationally can have an effect on the contract, the costs, and the daily operations. The environment is so dynamic that it is impossible to include all encompassing provisions that could describe every kind of situation and hence the legal solutions to these possible challenges.

Yet another problem that exists when contracting PPPs in the healthcare sector is what is termed “hold-up” behavior by the private sector (Parker & Hartley, 2003). This outcome is often seen as a result of opportunistic behavior by the private party due to possible information advantage and due to the fact that very few other private sector parties can be substituted as new partner alternatives, i.e. “small number exchange” (Williamson, 1985). In other words, the small number of private players in certain situations has the effect of reducing the other substitutes with whom to contract. Hypothetically, since it is assumed that there is no alternative party to contract with, the public sector must respond as best it can (and maybe not well) to the opportunistic demands of the private sector, thus potentially increasing overall costs of the project and decreasing the VFM proposition.

If we look at the problem from a ex-ante and ex-post perspective, we can see that imperfect information can lead to adverse selection (ex-ante) in the sense that the public sector can choose an inappropriate partner for the PPP, and moral hazard (ex-post) in the sense that the public sector will be put at risk of having to deal with demands from the private sector that will try to exploit the public sector.

Traditional procurement can be a possible way of overcoming the problem of “hold-up”. Nevertheless, it has been argued that the public sector is not in a position to achieve economies of scale and scope in the way that the private sector is able to do so. The private sector can pool orders for supplies, procurement and infrastructure. As for opportunistic behavior, a possible solution would be to bundle more services together into the contract. The Special Purpose Vehicle (SPV), which is a consortium of private sector companies involved in the project, would be in charge of managing the project and consequently owning and operating the facility. This vertical integration of



services (e.g. both clinical and non-clinical) would impose the proper incentives on the SPV to act responsibly and to minimize the risk of opportunistic behavior, adverse selection and moral hazard.

This brings us to the concept of relational contracting, but let us first of all briefly look into classical or standard contracting in order to understand better what relational contracting is and how it differs from the former.

Firstly, classic contract theory considers that the contract is exhaustive and complete (Lyons & Mehta, 1997). The completeness of the contract puts in place particularities and details describing what the parties can and cannot do in the partnership which has the purpose of eliminating ambiguity and opportunistic behavior (Lui & Ngo, 2004). In theory, an optimal contract can be seen as one which maintains the smallest transaction costs, these being; writing costs, unexpected contingencies, enforcement costs and renegotiations (Segal, 1999). In reality however, the legal costs of drafting a contract and the omnipresence of asymmetric information lead the majority of contracts to be "incomplete". In addition to this, the incompleteness also extends to the contract provisions, which cannot encompass an exhaustive list of possible or expected events and where therefore it is very hard to define contingencies for these events. It is also very difficult, within the contract, to introduce clear mechanisms to resolve issues as they would arise. Because incomplete contracts contain provisions that are poorly defined or broad, it becomes increasingly difficult for courts to maneuver around these non-legally binding details that can be easily misunderstood and hence misinterpreted (Deakin & Wilkinson, 1998). On the positive side however, incomplete contracts can be beneficial for their fulfillment. No matter how contradictory this sounds, since the contract has many unwritten spaces for the many unexpected situations that can arise, it can in fact lead to greater flexibility in choosing the right solution and this can lead to innovative pathways (Klein Woolthuis, Hillebrand, & Nooteboom, 2005).

Complementing the classical contract, the relational contract theory takes a more managerial perspective in which good relations are equally necessary. What is at the forefront of this theory is both parties must reach a relation of trust in order to achieve a positive and successful partnership. It is not something that can be explicitly stipulated or provided-for in a written contract. Once trust is established

and nurtured, the possibility to attain a mutually beneficial outcome is greatly increased because both parties work together with greater flexibility and adaptation. This crucial in long-term relationships such as PPPs (Zand, 1972). So what is it that maintains trust? Research has shown that certain mechanisms exist that have the effect of fortifying this type of arrangement. Examples include the expectation of repeat business, in addition to establishing and maintaining a solid reputation and the need to fulfill social obligations (Zhou & Poppo, 2006). The downside of relational contracting is that the public sector can become very dependent on one partner and therefore find itself in a position where it might not see newer opportunities and newer sources of information (Uzzi, 1997). In other words, the public sector can restrict itself in looking for new possibilities and thus remain in its comfort zone.

Certain authors clearly argue that both arrangements – relational and contractual – should not be used as substitutes but instead as complements (Klein Woolthuis, Hillebrand, & Nooteboom, 2005). What this entails is that the contractual part will incorporate the terms and conditions together with methods of resolving possible conflicts whilst the relational part will combine the bilateral trust mechanisms that include solidarity and the notion of continuance so that it may ultimately yield more effective cooperation and boost the confidence of both parties (Baker, Gibbons, & Murphy, 1994).

What is essential for PPPs is the understanding that there needs to be early interaction between the public and private sector in order to gain and build a mutual understanding of the underlying issues and risks, and hence build a relationship of trust and confidence. This method of early coordination has a positive effect on contract negotiation (Koppenjan, 2005).

### **3.2. WHOLE OF LIFE CYCLE COSTING AND CONTRACTING**

The idea of whole of life cycle costing and contracting is not new. This method has been used by governments and companies in order to evaluate the cost effectiveness of their purchases. Nevertheless it is important to understand firstly the theory behind life cycle costing (LCC) and then apply it to whole of life cycle contracts (WLCC).

#### **3.2.1. LIFE CYCLE COSTING**

*“Life cycle cost analysis is an economic method for determining all costs arising over an entire project’s or product’s life cycle from raw material acquisition [design], installation [building], operation, maintenance, to final disposal (Silalertruksa, Bonnet, & Gheewala, 2012).”*

What this means is that the public sector will want to obtain a fully disclosed and detailed analysis of costs that will arise over the entire life span of the project. This is often a very rigorous task that will involve many players and will require a lot of time. Even though this method is time consuming, it is easily justified within the scope and scale of such large PPP projects. More often than not, LCC is being required by the public sector in order to try to mitigate potential unplanned future budgetary increases but moreover it is a tool that can help decision makers see more clearly the different costs associated with the different stages of the project (Hansen, 2006). In other words, it provides proper information that can be used to evaluate projects and ultimately to make informed decisions about who obtains the final contract.

LCC is quite an elaborate method for forecasting costs. When compared to, for example, adjusted payback period (PBP) analysis, the LCC takes into account many more things such as: interest, salvage value, life of the equipment, taxes, opportunity cost in terms of the money’s alternate use and other factors (Hansen, 2006). Let us look at the equation for purposes of simplification:

$$LCC = I - S + M + R + E$$

The above equation is simplified but it does provide a clearer understanding of this method. It basically means that LCC is equal to (I) investment costs less (S)

salvage value plus (M) maintenance, (R) replacement (for example in the case of upgrades) and (E) energy costs. In other words, LCC provides us with a net benefit consisting of every expenditure and savings over the life of the building (in the case of a hospital). Simply said, if we apply this idea to hospital design for example, as a hospital building or facility achieves to lower the LCC without loss in overall performance, it can be said to be more cost-effective. Nevertheless, it is important to understand that this is only one of multiple methods of assessing a project and its use is often in parallel with other methods such as social rates of return.

Moreover, although not shown in the equation above, it is important to understand that in reality LCC also involves discounting (New South Wales Treasury, 2004). Time Value of Money (TVM) and Discounted Cash Flow (DCF) analysis stipulate that future costs need to be discounted. It expresses in the same values what happens today and what happens decades from now.

### **3.2.2. WHOLE-OF-LIFE CYCLE CONTRACTS**

As to whole of life cycle contracts (WLCC), it is essentially linked to LCC in the sense that since LCC shows the costs from beginning to the end of a project in a detailed manner, the WLCC should be a contract with one party that takes on the project from beginning to the end. The public sector is inclined to deal with one private sector entity instead of dealing with several different providers and thus have several different contracts. Risk transfer becomes most effective when there is a WLCC with a single private entity, in order to give that private party the best possible incentive to make sure that the whole of the design and building portion translate into a more efficient and effective operations and usage of the facility. This typical feature of whole of life contracts brings the concept of “bundling” (discussed in detail in the next section) into the discussion because currently more PPP projects are undertaken by “bundling” the different phases together such as finance, design, construction, operations, maintenance and, in some healthcare and hospital cases, also the clinical primary and secondary care.

### 3.3 VALUE FOR MONEY

In order to evaluate PPPs through a systematic financial measure, the approach of Value for Money (VFM) is used. Part of the toolbox in calculating VFM is the Public Sector Comparator (PSC). VFM is a measure that essentially compares what the government would spend using traditional government procurement methods to what the private sector would spend by delivering this project. In other words, the difference in cost over the alternative cost through traditional procurement is the VFM. This can be published through monetary value or percentages (see Figure 4). (PWC, 2010)

Traditional government procurement expected costs (PSC)	\$100 Million
Expected cost of private sector delivery	\$95 Million
Difference in Cost	\$5 Million
Value for Money	\$5 Million or 5%

Figure 4: Value for Money Calculation

Source: (PWC, 2010)

Important to note is that VFM compares to Net Present Value (NPV) of the project under government procurement versus the NPV of the payments that the government is expected to make to the private sector following the PPP alternative.

A PSC study is always prepared to provide a basis for comparison, however in the past it was not always the case. The reason being that governments did not always want to provide one if the public sector was not willing to undertake the project in the first place (Ball, Heafey, & King, 2000).

The PSC nevertheless is an integral part of the valuation process. What is important is for the PSC to be as realistic as possible and to account for the

underlying activities that can be accounted for in monetary terms. This being said, the PSC does not unfortunately take into account the non-quantifiable or non-monetary factors into account. These are, for example, the quality of the service, risk transfer, and other wider policy objectives (Treasury Taskforce Private Finance, 1998). This implies, that the decision maker (in this case the public sector) must progress with due diligence when evaluating a PPP bid. In the event of a PPP bid being higher than a PSC, it should not involve automatic rejection. On the contrary, certain higher cost PPPs can provide better VFM. Further analysis can demonstrate, for example, that if risk transfer and projected quality of service were to be quantified, total VFM would be positive.

### **3.4. BUNDLING**

Grimsey and Lewis (2004) begin by looking at bundling as an integration of all major infrastructure activities within a PPP:

*“A defining characteristic of PPPs is the integration within a private sector party of all (or most of) the functions of design, building, financing, operating and maintenance of the facility in question, often in the form of a special purpose vehicle [SPV] (or virtual corporation) created for the specific project.”* (Grimsey & Lewis, 2004)

However, the idea of bundling extends beyond simple building, finance, operations and maintenance. It pursues the idea that performance and outcome of a PPP can be influenced positively through enveloping medical services into its core activities (Barlow, Roehrich, & Wright, 2011). These medical services can either take the form of clinical services or even primary care services within a community or region, which advances the bundling concept to its maximum point.

An underlying factor in this concept is the transferability of risk to the private sector. The merit in the bundling approach is that it leads to the integration of construction and operating risk (Quiggin, 2003). Moreover, the SPV needs to manage the risk whether it concerns construction or operation, since he will have to handle the repercussions. In addition, bundling together different activities and their associated risks – ranging from bid and contract negotiation, design and construction to lifecycle maintenance – should create

incentives for the main contractor to deliver reduced whole-life costing and performance improvements. In summary, the contractor will bear the responsibility for the facility, not just upon completion and handover to a client, but for many decades to come.

### 3.4.1. SPECIAL PURPOSE VEHICLE (SPV)

As discussed earlier, a PPP has two main sides: the public sector and the private sector. However, a large number of different parties fall within the private sector and each of them play a significant role in the delivery of the whole project.

These numerous different participants come together and form a consortium called the special purpose vehicle. This is an ad-hoc entity created specifically for the delivery of the PPP project (Delmon, 2010). As seen in figure 5, it binds together financiers, contractors, subcontractors, advisers, designers, and operations specialist. The figure below is only an example and an SPV can be adapted to suit different PPP models depending on their underlying structure.

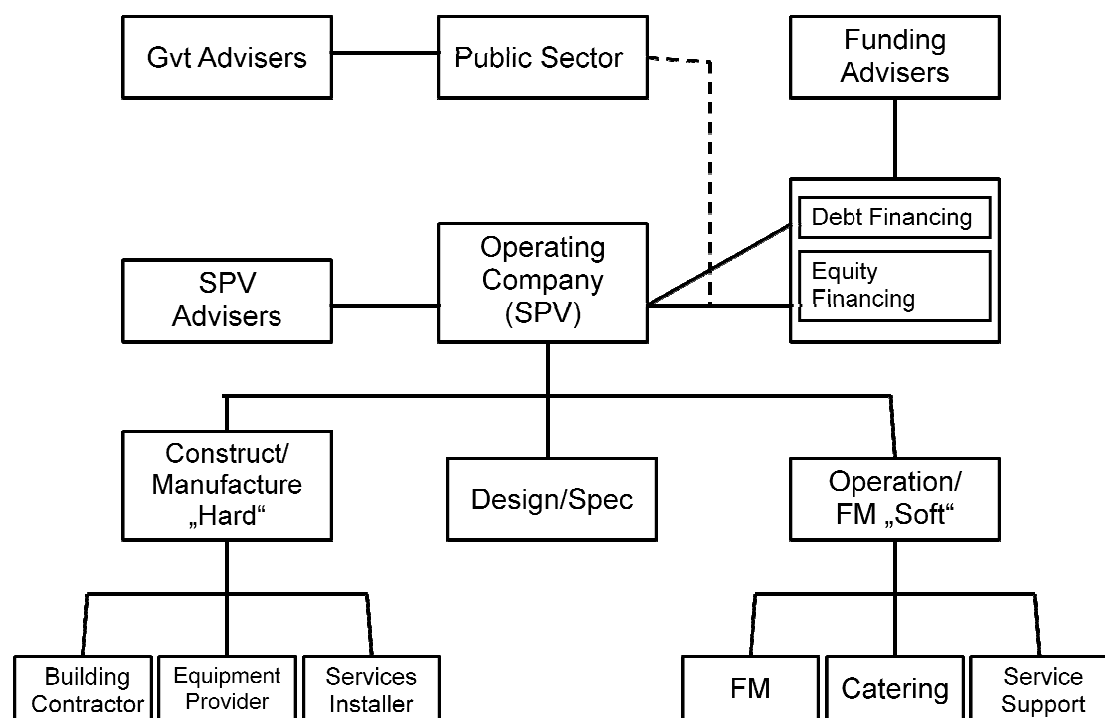


Figure 5. An example of a private sector consortium in the form of an SPV.

Source: Adapted from (Grimsey & Lewis, 2004, p. 110)

The role of the SPV is to undertake the activity which has been defined in the contract, and the public sector usually signs one single PPP contract with the SPV. Within the SPV, the different parties have a clearly defined separation of duties and their associated risks. Nevertheless, the structure of the SPV usually includes a general steering committee that takes the role of the manager in terms of the whole project execution. The risks are high and therefore the interests of the different smaller parties must be aligned with the focus of the project in order to control for conflicts of interest and for decisions that would otherwise go against the agreed-upon objectives of the partnership (Delmon, 2010).



## 4 PPP MODELS AND CASE STUDIES

In this section, different PPP models will be analyzed more closely. The following models will show how the concept of bundling changes the scope of the private sector within the partnership and how it affects the provision of healthcare, largely through the incentive structure created. This section will provide a specific example to each model. Figure 6 shows a summary of the following case studies.

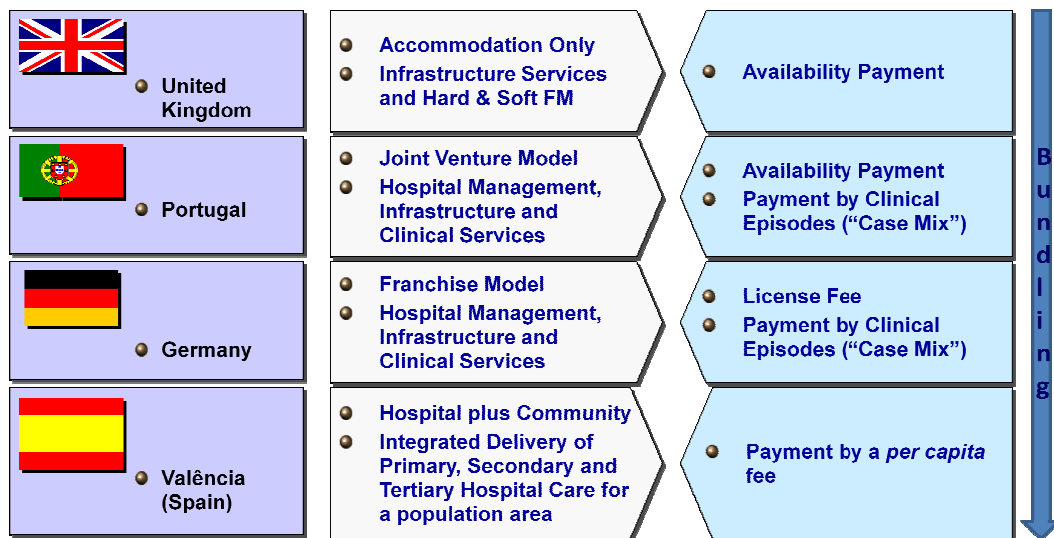


Figure 6. Case studies and their respective PPP models including remuneration methodology – in relation to the increase in bundling.

Source: Adapted from (Simoes, 2005)

### 4.1. PFI – ACCOMMODATION ONLY

This initiative was first introduced officially in the UK in 1992 under the Conservative government. It was essentially developed because of the risk of inflation and the need to control more tightly government expenditure. A further factor that influenced this development was the belief that PFI would deliver greater VFM (HM Treasury, 1995). According to Ball et al (Ball, Heafey, & King, 2000), PFI differs from conventional public sector procurement of capital projects in three ways:

1. The private sector is responsible for building, maintaining and operating the facility. In other words, the public sector does not own the asset, but instead it effectively leases the asset.
2. The public sector specifies its output requirements and therefore all is geared towards the services that are expected in the end. In this case, it is up to the private sector to establish the design that would be best suited in order to answer to the public sector's requirements.
3. Finally, it is essential that some of the risk be transferred to the private sector otherwise the deal would be classified as contracting under public provision and not PPP. Note that there is a variety of accounting rules at national, EU and international level which bear on the definition of risk transfer and procedural issues in defining PPP.

Figure 7 helps to visualize how a PFI project is divided into several phases (it is essentially identical for other types of PPP models). This simply illustrates how the PPP progresses through the initial stages which include the tendering and bidding phase to the approval and construction phase to finally end with the operating phase.

The process clearly begins with a request for widespread publication such as in the Official Journal of the European Union (OJEU), upon which private firms and consortia bid for the project. The bidders enter into negotiations and a winner is chosen in one or more usually several stages. At that point the details of the contract are finalized and the construction phase begins. Many different specialized firms work on the project and are managed by the SPV at the heart of the structure in order to centralize the decision process. Upon completion of the construction the operation phase begins with the public sector monitoring Facilities Management (FM). In other types of PPPs such as full service and joint ventures, the operations phase would not only include FM but also clinical service and more. Within the operations phase, there would be systematic monitoring and benchmarking of the services in order to assure quality as per contract standards.

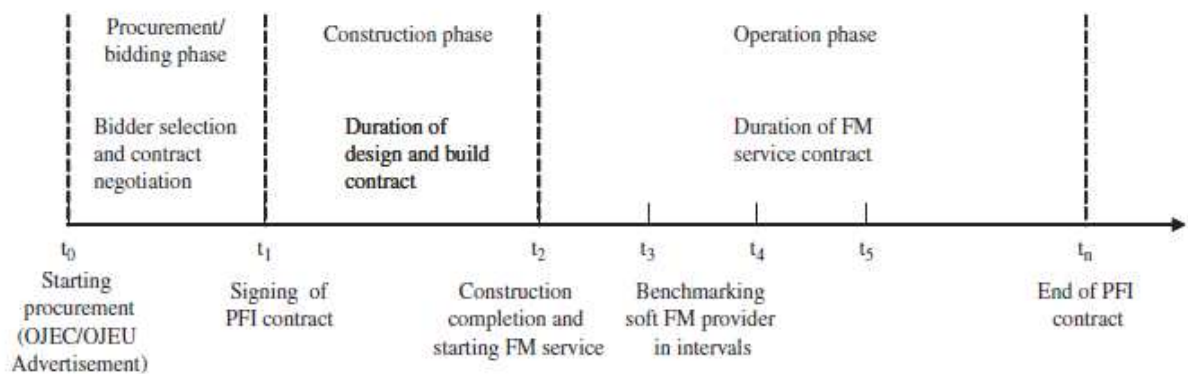


Figure 7. Generic timeline for a PPP/PFI project

Source: (Zheng, Roehrich, & Lewis, 2008)

### **CASE STUDY: PFI PEMBURY HOSPITAL**

This is a good recent example of a PFI built hospital in the UK. This brand new facility consolidates two hospitals: the current Pembury hospital and the Kent and Sussex hospital. The tender for this facility began in 2005 and construction began in 2008 three years later. The facility has been fully completed in early 2012.

The cost of this projects amounts to £235 Million (about €296 M at the exchange rate applying in 2008) and the contract length is for 30 years. The contract specifies for the private consortium (managed by an SPV) to design, build, finance, and operate the facility.

The design of this particular hospital is innovative in several ways. Firstly, it is the first public hospital built in the UK to offer 100 per cent single bedrooms with en-suite facilities for a total of 512. This concept of having single bedrooms is believed to be valuable for patient dignity, but also effective in eliminating infections and cross-patient transmissions. Furthermore, the interior room design facilitates the movement of patients from their beds, thus limiting falls and slips.

Secondly, the planned treatment and emergency departments have been separated in order again also partly to minimize the spread of infections. The inpatient and outpatient departments are separated in order to maintain privacy and dignity.

Thirdly, the design incorporates some interesting engineering features. The facility itself has been built in a very picturesque area on the outskirts of the village of Pembury and the majority of rooms have access to a view of the woodland – which is said to be proven to aid recovery (House of Commons Treasury Committee, 2011). Moreover, the whole design has been created using five-dimensional software to ensure the highest possible build quality. Many of the build units were preassembled which made it possible to ensure high quality but also effectiveness in building the facility. Furthermore, the ventilation system is quite unique. Digital thermal modeling was used to simulate the temperature of the facility. Consequently special windows with vents have been implemented in order to ventilate adequately the single rooms and also part of the common areas of the hospital (Hartman, 2009).

#### **4.2. JOINT VENTURE (JV) – INFRASTRUCTURE AND CLINICAL SERVICES**

The JV model is essentially a Design Build Finance Operate (DBFO) model but that also incorporates the provision of clinical services. The specificity of this model is that it is structured in a way where there are two separate SPVs that work together to fulfill the requirements of the single contract. What this means is that the public sector signs one contract with two SPVs that work together in a joint venture to provide respectively the clinical services and also the infrastructure part. Figure 8 shows how such an arrangement functions. As one can see, there is an additional contract between the two SPVs. This is an internal contract and it ensures better coordination between the two SPVs.

What is special about such an arrangement is that within the main contract signed with the public sector, there are provisions that differ as to the contract length between the infrastructure SPV (let us call it InfraCo) and the clinical services SPV (let us call it ClinCo). The typical arrangement is usually 30 years for InfraCo and around 10 years for ClinCo. The InfraCo is responsible for the design, construction and maintenance of the facilities and the non-clinical equipment (such as elevators, furnaces, heating etc). The ClinCo on the other hand is responsible for clinical services obviously but also ancillary services and clinical (medical) equipment. In terms of medical equipment, ClinCo is in charge of purchasing the appropriate equipment and replacing it as needed. The main

reason for the shorter contract length is the likelihood of future changes in clinical needs as the hospital may be required to adapt to changing demand but also because of the fact that the ClinCo requires smaller investments compared to the InfraCo (Banco BPI, 2009).

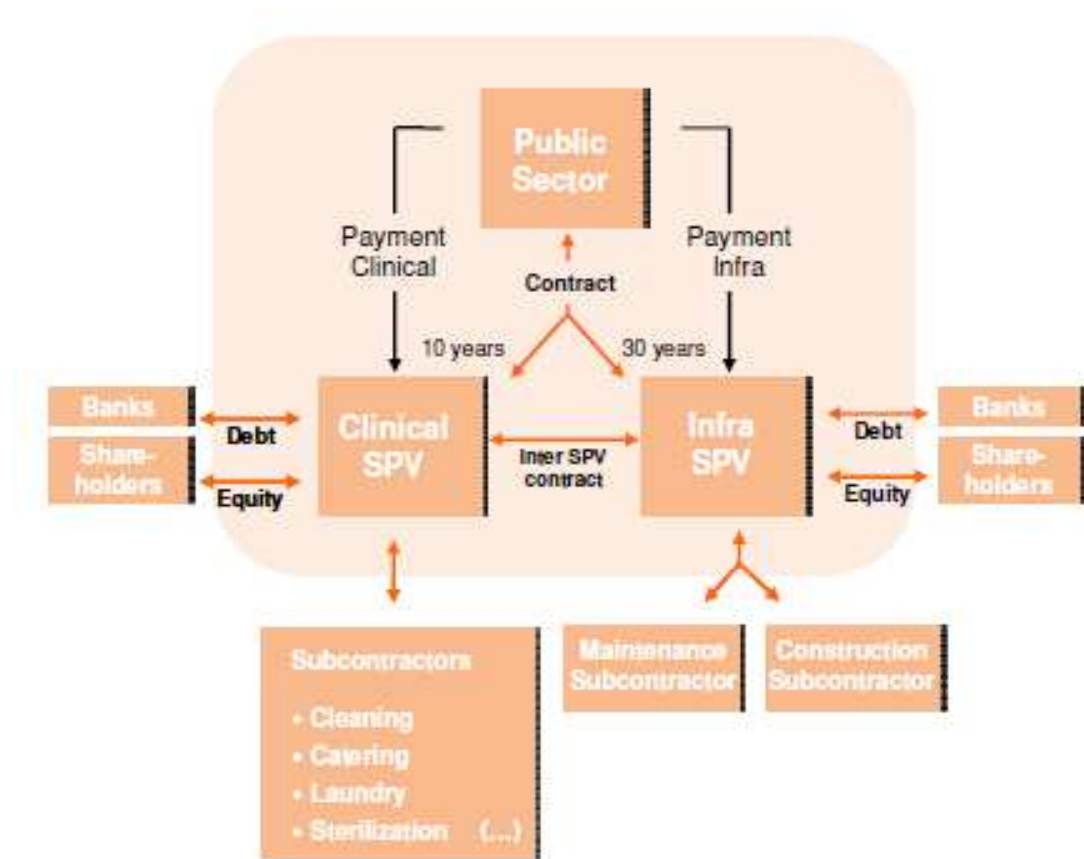


Figure 8. Joint Venture arrangements.

Source: (Banco BPI, 2009)

The payment mechanisms in place differ between the InfraCo and the ClinCo. There is a distinction when it comes to paying for services and paying for availability.

Firstly, the ClinCo is typically remunerated through several criteria: clinical activity, availability, and medicines usage (Lovell, 2008). Furthermore, there is the possibility for deductions as a result of poor performance or non fulfillment of pre established obligations. For clinical activity, the public sector will pay the private provider based on the number of inpatient episodes, consultations,

emergency episodes, and day surgery treatments. For the availability, the costs are fixed, since the ClinCo is paid for having the Emergency Room (ER) and Accident and Emergency (A&E) services available around the clock, throughout the year. The price is negotiated and set in the contract. It is not variable. Medicines, are repaid on the basis of usage – though the prices are benchmarked and thus must fall within industry averages. Moreover, the idea of benchmarking is also applied to the maximum amount that the facility can charge for procedures. These amounts cannot exceed the current price that would be applied in the public sector hospitals. Any revenues obtained through third parties such as insurance companies must be shared with the public sector (Banco BPI, 2009).

Secondly, for the InfraCo, the remuneration method is slightly simpler and, in effect identical to a PFI. The payments that flow from the public sector to the private sector consortium relate to availability only (Lovell, 2008). This signifies that the public sector pays for the availability of the facility. In essence, the public sector makes “availability” payments to service the debt, with an excess for shareholder remuneration, and other costs such as maintenance and operations. The former is not indexed to inflation whilst the latter is indexed to inflation (Caixa-Banco de Investimento, 2008). Nevertheless, even in this case, there is a possibility for deductions. These deductions are based on two possible criteria: availability failure and service failure. The former is associated with issues of safety, accessibility, and usage of the facility. If these are not in accordance with the terms of the contract, the public sector may impose deductions up to 100 percent of InfraCo’s annual payments. As for service failure (not meeting objectives in terms of management and efficient operations of the facility), deductions cannot exceed 10 percent. On a small note, if the InfraCo happens to make profit from commercial activities (such as parking or renting floor space to small internal shops), the profit must be shared with the public sector (Simoes, 2005).

#### **CASE STUDY – HOSPITAL DE BRAGA, PORTUGAL**

This world class hospital opened its doors in May 2011. The tender for this hospital began in January 2005 and it took around 32 months to complete the negotiations and start the construction phase. With its 705 beds, this hospital

extends its services to approximately 1.2 million people in the area and replaces one current obsolete facility (Sao Marcos Hospital) – which has since been discontinued (Hospital Braga, 2001).

Total lifetime costs of this project amount to €1.18 billion (construction costs of about €120 million) with a InfraCo contract extending for 30 years and a ClinCo contract extending for 10 years. This facility is part of the Minho University and serves as a teaching hospital. What is especially interesting is that the Portuguese government has evaluated this project to offer higher quality services at equal costs to patients and it estimates government costs savings of 14% versus a purely public procurement option (The Global Health Group, 2010)

This hospital is set up via two SPVs. The InfraCo is mandated to deliver in terms of construction, maintenance and operation of the facility for the duration of the contract (30 years), whilst the ClinCo is in charge of offering the non-clinical as well as the clinical component of this facility – and this for a period of 10 years.

Certainly, this project aims to achieve many targets; economic, social, qualitative and quantitative. Below are the main characteristics that the facility is set to address.

The facility remains part of the national health system and therefore is accessible to all residents with no supplemental out-of-pocket (OOP) payments, and it offers access to all of its services. In other words, this PPP is seen as being cost neutral for the residents since it is part of the national system.

As for the allocation of risk, the private sector assumes the responsibility of employing the medical staff and running the clinical daily operations thus also managing the risk that comes with it.

For the government this initiative provides a way to keep a more constant flow of expenditures since InfraCo is paid based on availability – which remains fairly constant throughout the contract – whilst ClinCo is remunerated on annual contracts which also have the tendency to be low volatility over the short run (Carola, 2005). Furthermore, what is important is that through this risk transfer mechanism, the government, through its monitoring and performance

evaluations, can withhold payments or make appropriate deductions (according to the contract) relating to any aspects of the services that have not been fulfilled.

Important to note in this case is the ownership of the assets. The government maintains the legal ownership of the asset throughout the contractual period. The JV agreement only stipulates for the management part by the private sector but not of ownership.

Finally, the Braga hospital has been established to outperform the current teaching hospital, provide better quality services, no additional costs to patients, and an overall VFM gain of 14% in comparison to traditional procurement. All within the framework set forth by the national health system.

#### **4.3. HOSPITAL FRANCHISE**

This model is more integrated compared to the joint venture model, in the sense that under the hospital franchise, the private sector agrees to run a complete facility under the same tariffs as a publicly controlled hospital. Furthermore, the hospital franchisee is invariably a single private company that controls both the accommodation and the clinical part. However, this model remains a true PPP, given that the facilities and their offering remain under the control of the government (Barlow, Roehrich, & Wright, 2011).

Under this model, the private sector obtains the hospital license and is handed all liabilities and assets associated with the facility. In other words, whether it purchases an older facility or builds a new one, the private sector is owner of the physical assets. This is often termed Build Own Operate (BOO) or Acquire Own Operate (AOO) (Wilton Park, 2008, p. 7). Typically under the franchising model, the financing is 100% private but this is by no means essential (many of the German commercially-run hospitals accept some state capital grants, and even a partial public shareholding).

#### **CASE STUDY – BERLIN BUCH HOSPITAL, GERMANY**

During the 1990s, the Berlin Buch Hospital was in desperate need of large investment to help it overcome its decrepit state. Neither the Charite University,



to which it is affiliated, nor the State of Berlin, under which it was managed, had the capital necessary to make that type of investment. Therefore a tender request was submitted and in 2001 Helios Kliniken, a private hospital operator, won the bid to operate the current facility and to provide a new facility in the near future – the latter coming to replace the existing hospital (The Global Health Group, 2010).

Under the contract, Helios agreed to the concession on the current facility plus the construction and maintenance of a new facility that would include clinical services. The construction contract stipulated that Helios would need to build a new 1100 bed facility to replace the existing one, but would be able to operate the existing facility lease-free during the mean-time (until 2008 maximum). This aligned the incentives for Helios to build the new facility on time, in July 2007 (Helios Healthcare International, 2012). It also helped the provider to access stable revenue levels during this phase, assuming that patient volumes remained constant.

The hospital remains a university teaching hospital, and the agreement between the public sector and private sector guarantee that the research and education aspect of the facility will be financially supported by the government (State of Berlin), whilst all other financial aspects are the responsibility of Helios. Education activities will continue to be managed by Charite University. The medical staff are employed directly by Helios. Also, in terms of benchmarking, Helios is mandated to provide transparent information to the government, such as through audited annual reports (Nikolic & Maikisch, 2006) and through peer and public oversight.

The important impacts are on cost efficiencies. Given the financial burden being shifted entirely on the private sector, it was able to achieve cost savings, in the construction phase, of €135 million (estimated costs were €350 million versus realized costs of €215 million). Furthermore, operational efficiencies have made it possible for Helios to decrease by 10% its staffing costs without having to cut positions (Nikolic & Maikisch, 2006).

Relating to the financial aspect of this model; just as the new Berlin Buch hospital came to completion in 2008, a new funding mechanism in Germany was

introduced. Germany had moved from a patient-day charging system to a cost-per-case method. What this means is that a flat rate was now being charged based on a Diagnosis Related Group (DRG). This created an incentive to increase efficiency within the hospital sector. The primary levels on which to improve were productivity and overall performance. A clear example can be found in the number of inpatient days at a German hospital versus the average of the EU. In 2006, average length of stay was 7.9 days in Germany whilst the EU averaged only 6.5 days. This signified that efficiency gains are necessary. The underlying reason for the introduction of the DRG system was that there should be a unified flat rate for treating a condition, and it should not be influenced by the treatment method or particular costs imposed by a hospital (Rechel, Erskine, Dowdeswell, Wright, & McKee, 2009).

#### 4.4. FULL SERVICE – HOSPITAL PLUS COMMUNITY

The Full Service PPP constitutes an approach that incorporates several different levels of care and several different facilities within a geographical area – or community. Figure 9 depicts this model.

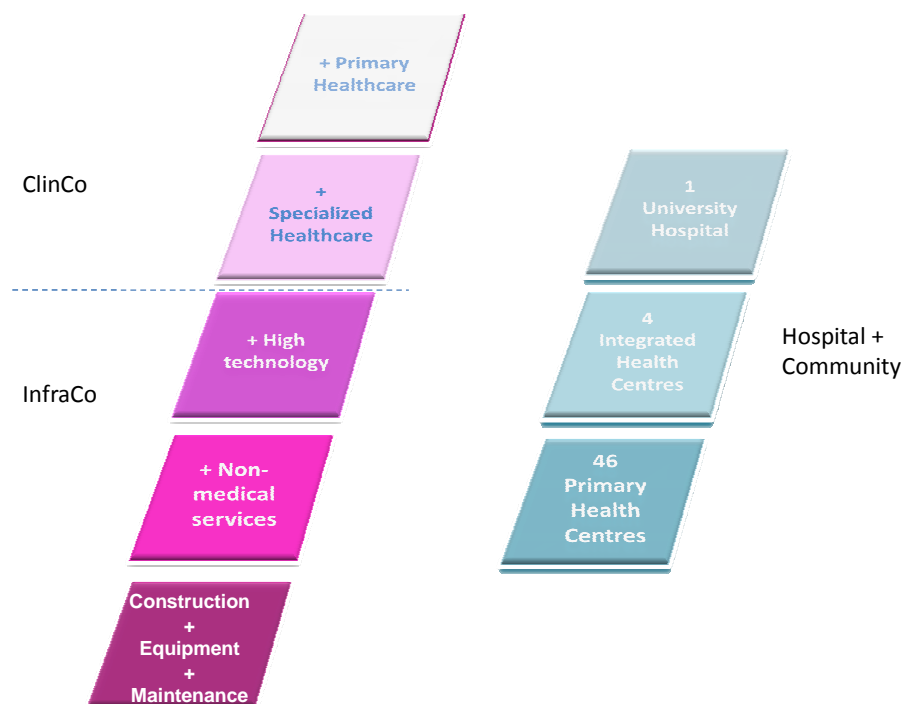


Figure 9. Full Service Hospital + Community

Source: Adapted from (de Rosa Torner, 2011) (The Global Health Group, 2010)

This final model builds upon the other ones and is considered full service because it provides the accommodation part and the clinical part. However, in addition, it provides a community health service for the whole area thus incorporating also primary care – which is used within the model as a “gatekeeper” function to control access to the hospital. What is also unique is the remuneration method for the private sector. This is calculated on a capitation basis, where payment is unrelated to the services delivered.

In terms of bundling, this model incorporates the full extent of possible manageable factors to the private sector. It expands the envelope of the contract to endorse the full array of services from accommodation to the inclusion of clinical services and the integration of primary care.

A full service hospital works as an integrated system. The private sector, once again under an umbrella consortium or SPV, is mandated to provide healthcare services for a defined population – for a defined area. The contract defines that the private party must build, operate and maintain a hospital as well as other primary care facilities in the community.

Given that the private sector is in charge for all health services in a given area including primary care, it can direct patients to whichever level of care happens to be the least expensive. This insures that all levels of care are used appropriately and it minimizes the use of more expensive services if they are not needed. The private partner relies to a great extent on primary care practitioners to be the gate keepers and refer only appropriate cases to a secondary or tertiary level of care - but these are employees of the company as well. This helps minimize costs, create greater efficiency, reduce waiting times, increase quality and ultimately increase patient satisfaction.

In order to sustain quality, the full service model includes regulatory and payment mechanisms. The regulatory framework is set in a way that the private sector must fulfill requirements that are set by the government and which are systematically monitored. Examples include a maximum threshold for waiting times, or a minimal rate of immunization for the serviced area. These objectives are set according to national standards and averages. Consequently, the hospital and affiliated centres have a strong incentive to maintain high levels of healthcare

services because they must retain patient loyalty – due to the fact that the remuneration method is based on a “money follows the patient” approach (Rechel, Erskine, Dowdeswell, Wright, & McKee, 2009). Furthermore, under this system, if a patient travels outside the area to seek healthcare, the costs incurred are billed back to the original hospital company. This is once again a strong incentive to make sure that patients are satisfied with the level of care provided in the area.

Finally, the capitation method works on the basis that the government agrees to pay a specific amount for each person who will be “serviced” by these facilities. The amount is set yearly.

#### **CASE STUDY – HOSPITAL DE LA RIBERA, SPAIN**

Given the lack of a hospital for the Alzira region of Valencia, the local government initiated the first PPP in Spain. The tender request was placed in 1997 and in 1999, only two years later, Hospital de La Ribera opened its doors.

This hospital of 300 beds serves a population of 250,000 people. However it was only from 2003, after a renegotiation of the contract, that the private consortium was given the mandate to serve the whole area in terms of primary, secondary and tertiary care services (this was probably the result of financial problems with the original hospital-only contract).

This PPP includes 1 hospital, 46 primary care centres and 4 integrated care centres. The concession period is currently set for 15 years however it can be extended to 20 years (The Global Health Group, 2010).

The consortium in charge of this project was selected to design, build, operate, and maintain (DBOM) the facility and related facilities. The initial investment was in the amount of €61 million, for the construction of the hospital, with an additional €68 million in the second phase to be invested into the primary care segment for the duration of the contract (The Global Health Group, 2010). Payment is done through the capitation method with current per capita payments set at €607 (NHS Confederation, 2011).

Nevertheless, what makes this facility special is its potential for cost savings and its use of several innovations for the integration of services on a community wide level.

Under the terms of the contract, the private sector receives a capitation payment that is 25% lower than what it costs the public sector in other areas of the Valencia Region (assuming traditional provision). This is presumably due to the fact that the private sector can make use of managerial efficiencies. As for innovations, the Alzira model makes use of its primary care centres to limit the number of unnecessary referrals to the hospital. It also established an information technology (IT) infrastructure and it *“was the first public hospital in Spain with a fully integrated, computerised medical history system, including nursing and medical notes, test results and imaging”* (NHS Confederation, 2011, p. 12).

The outcomes so far have been promising. In summary, the patients seem very satisfied with positive survey outcomes. The model retains patients, which is key to its functioning. Furthermore, for the staff members, the turnover is lower than the national average as is absenteeism. The emergency waiting times, average hospital stay and average surgery delay are lower than the average for the region (NHS Confederation, 2011). Finally, this PPP provides a complete approach towards bundling with its myriad of services offered. It has been awarded the title of Spain's best large hospital numerous times. (The Global Health Group, 2010)

#### **4.5 INSIGHT FROM THE HACIRIC RESEARCH**

HaCIRIC stands for the Health and Care Infrastructure Research and Innovation Centre and its mission is to deliver world class research to support better healthcare through better infrastructure. It was initially intended that the HaCIRIC Research would provide insight into new developments in health related PPPs, however the current project is still currently underway and cannot be made the subject of this section.

Nevertheless, the ongoing research aims to provide evidence through supported models of current PPP health facilities in Europe, where the private sector is not merely an accommodation-only supplier but also one that provides related and clinical services. The current facilities and communities under investigation are thought to provide more aligned incentives for the private sector thus enhancing overall quality.

The current research specifically will try to answer whether a reasoned judgement can be made that performance improves as one moves through the spectrum from accommodation only to a joint venture to a franchise to a community full service model. It may not finally decide the issue, but it plans to evaluate rigorously the various models. Certainly it is difficult to predict whether one model can clearly be a best solution and ultimately one must consider the question whether a particular model that functions effectively in one country can be transplanted elsewhere.

## 5. CONCLUSION

The goal of the thesis was to search for significant factors that have influenced Public Private Partnership projects in the European Healthcare sector.

Certainly many factors play a role in shaping PPP policies, models and influencing outcomes. In summary, the most notable are proper contractual relationships that include both classical contracting and relational contracting. Furthermore, it is essential for both private and public parties to get involved at an early stage and establish a mutual understanding of the objectives of the partnership. The alignment of proper incentives is crucial as is the transfer of risk to the party that knows best how to manage it. Finally, utilizing the concept of bundling can lead to providing a more efficient pathway to secure efficiencies that drive healthcare provision.

Conventional public and PPP procurement methods have very significant differences. Under normal procurement methods, the government sets what it wants in terms of inputs, and then manages, controls and oversees how the project is delivered and ultimately how the consequent services are delivered to the public (Bennett & Iossa, 2005). However, under a PPP, it is the government's role merely to specify the service output that it requires. The output in the healthcare sector takes the form of a basic service standard – of estate or medical services - that the government wants to be provided to the public, and as of that moment it is the private firm or consortium that takes the project into their own hands. The private firm therefore has control rights as to how to deliver the expected service to the public. (Bennett & Iossa, 2005).

In order for the state to ensure the provision of public services of best quality at the lowest cost, PPPs propose to integrate the activities of parties with differing interests but on common projects and thus to use as well as is possible the core competencies of the different parties in order to manage the risks and to share the common benefits. Partnering with the private sector on healthcare projects can yield benefits to the public sector and within that also to the health sector.

Risk in any venture is expected, however it is the way that the risk is handled that counts. Since our case relates to healthcare facility projects, one could firstly see

a potential for construction risk. Secondly, availability risk relates to the indirect pressure that is always felt by the public sector due to the fact that they are responsible for the constant provision of the service. Thirdly, demand risk must be taken into account as this relates to the dynamic system of healthcare in which there is changing demand in terms of healthcare services.

The idea that private involvement may lead to greater efficiency is not new. Furthermore, the same can be said about the private sector being considered more efficient when it comes to building construction, maintenance and operation. However, what is new is the idea of bridging the public and private sector in order to make use of these greater efficiencies. The different PPP possibilities depend on many factors; whether the private firm owns or leases the facility, manages some or all of the medical services, whether it employs the staff, and whether it is in charge of any future capital investments and upgrades to the current facility. On the other hand, it is important to note that the public sector (the government) will base its decision on other factors such as: the needs of the community for increased services, its own ability to oversee and effectively control and regulate the provision of services and quality of private firms and of course the view of the public on the need of reforms in healthcare and what role the government should play in this context (Grimsey & Lewis, 2004).

Transaction cost economics cannot be overlooked and deals with three things when it comes to PPPs. The first one has to do with the costs of searching for the best or most suitable private partner. This means that it includes costs associated with the tendering process which can often be very long depending on the size of the project. The second point deals with the costs of drafting a “bullet proof” contract that would presumably contain all the clauses, provisions, and terms and conditions that would leave no space for any unforeseeable events – hypothetically speaking (so-called “complete contracts”). The third point deals with costs that have to do with the monitoring of the contract to see whether both parties abide by the pre-agreed rules and costs of sanctioning and compelling the parties to carry-out their duties or responsibilities (Coase, 2005).

Moreover, certain methods of contracting and valuation, such as whole of life cycle contracts - showing the costs from beginning to the end of a project in a



detailed manner, and value for money analysis, are essential in providing a solid ground for making decisions.

Finally, bundling together different activities and their associated risks – ranging from bid and contract negotiation, design and construction to lifecycle maintenance – should create incentives for the main contractor to deliver reduced whole-life costing and performance improvements. In summary, the contractor will bear the responsibility for the facility, not just upon completion and handover to a client, but for many decades to come.

PPPs provide proper risk allocation, incentivize appropriate behavior, and are most successful in areas where service quality can be clearly specified, measured and guaranteed. The PPP examples and case studies in healthcare, which have bundled several activities such as infrastructure, non-clinical services, clinical services and community services, show there may be promising healthcare and financial outcomes. Nevertheless, further research is required to clearly decide on this issue.

## BIBLIOGRAPHY

Baker, G., Gibbons, R., & Murphy, K. J. (1994). Subjective performance measures in optimal incentive contracts. *Quarterly Journal of Economics* , 1125-1156.

Ball, R., Heafey, M., & King, D. (2000). Private Finance Initiative - a good deal for the public purse or a drain on future generations? *The Policy Press* , 29, pp. 95-108.

Banco BPI. (2009, November 26). Health PPPs in Portugal: single and twin SPV PPPs.

Barlow, J., Roehrich, J., & Wright, S. (2011). Are public private partnership hospital projects a healthy option? Emerging European Experience.

Barrows, D., Macdonald, I., & Harvey-Rioux, A. (2011). *Public Private Partnerships in Canadian Healthcare: A case study of the Brampton civic hospital, prepared for the OECD*. Retrieved January 16, 2012, from OECD Web site: [www.oecd.org/dataoecd/54/38/47814779.pdf](http://www.oecd.org/dataoecd/54/38/47814779.pdf)

Batran, A., Essig, M., & Schaefer, B. (2005). *PUBLIC-PRIVATE PARTNERSHIPS AS AN ELEMENT OF PUBLIC PROCUREMENT REFORM IN GERMANY*. Retrieved May 28, 2012, from United Nations Procurement Capacity Development Centre: <http://www.unpcdc.org/media/6268/public-private%20partnerships%20as%20an%20element%20of%20public%20procurement%20reform%20in%20germany.pdf>

Bennett, J., & Iossa, E. (2005, June). *Centre for Market and Public Organisation: Working Papers*. Retrieved April 2, 2012, from Bristol University: <http://www.bristol.ac.uk/cmpo/publications/papers/2005/wp124.pdf>

British Columbia Medical Association. (2012). *Policy Statement: Public Private Partnerships in Health Care*. Vancouver: BCMA.

BusinessDictionary.com. (2012). *Definition*. Retrieved April 20, 2012, from Business Dictionary Web site: <http://www.businessdictionary.com/definition/contract-risk.html>

Caixa-Banco de Investimento. (2008). Healthcare PPPs in Portugal. *Finance and Healthcare Conference* . Grupo Caixa Geral de Depósitos.

Carola, A. (2005). *PPP in the Portuguese healthcare sector: the role of the two project companies, InfraCo and ClinCo. Finance and Healthcare 2005*. Milano: Millenium bcp investimento.

Coase, R. (2005, September 26). *Theories Used in IS Research: York University*. Retrieved May 16, 2012, from York University Web site: <http://www.istheory.yorku.ca/transactioncosteconomics.htm>

de Rosa Torner, A. (2011, March 24). The National Context. The Alzira Model, the early days. *NHS: European Exchange Study Visit For Senior Healthcare Professionals, Managers and Policy Makers* . Alzira, Spain: Ribera Salud Grupo.

Deakin, S., & Wilkinson, F. (1998). Contract law and the economics of interorganisational trust. In C. Lane, & R. (. Bachmann, *Trust within and between organisations: Conceptual issues and applications* (pp. 146-172). Oxford: Oxford University Press.

Delmon, J. (2010). Partenariats publicprivé dans le secteur des infrastructures: Guide pratique a l'intention des decideurs publics. USA: The World Bank.

European Commission Directorate General Regional Policy. (2003). *Guidelines for Successful Public Private Partnerships*. Brussels: DG Regional Policy.

European Policy Centre. (2012). *Europe's Political Economy: Coalition for Health, Ethics and Society*. Retrieved January 16, 2012, from European Policy Centre: [http://www.epc.eu/prog\\_forum.php?forum\\_id=7&prog\\_id=2](http://www.epc.eu/prog_forum.php?forum_id=7&prog_id=2)

European PPP Expertise Centre. (2012, March). *Home: European PPP Expertise Centre*. Retrieved April 2, 2012, from European Investment Bank: [http://www.eib.org/epec/resources/epec\\_market\\_update\\_2011\\_en\\_web.pdf](http://www.eib.org/epec/resources/epec_market_update_2011_en_web.pdf)

Garvin, M. J., & Bosso, D. (2008, October). Assessing the Effectiveness of Infrastructure Public Private Partnership Programs and Projects. *Public Works Management & Policy* , pp. 162-178.

German Transport, Construction and Housing Ministry. (2008, January). *Search: Bundesministerium fur Verkehr, Bau und Stadtentwicklung*. Retrieved May 28, 2012, from Bundesministerium fur Verkehr, Bau und Stadtentwicklung: <http://www.bmvbs.de/cae/servlet/contentblob/32222/publicationFile/10717/ppp-und-mittelstand-endbericht.pdf>

Grimsey, D., & Lewis, M. K. (2004). *Public Private Partnerships: The worldwide revolution in infrastructure provision and project finance*. Cheltenham: Edward Elgar.

Hansen, S. J. (2006). *Performance Contracting: Expanding Horizons*. Lilburn: The Fairmont Press Inc. .

Hart, O. (2003). Incomplete contracts and public ownership: Remarks and an application to public private partnerships. *The Economic Journal* , C69-C76.

Hartman, H. (2009, June 25). *Natural Ventilation, Pembury Hospital, Kent*. Retrieved May 24, 2012, from The Architect's Journal: <http://www.architectsjournal.co.uk/footprint/projects/natural-ventilation-pembury-hospital-kent/5204107.article>

Hayford, O. (2006). *Successfully allocating risk and negotiating a PPP contract*. Sydney: Clayton Utz.

Hearne, R. (2009). Origins, Development and Outcomes of Public Private Partnerships in Ireland: The Case of PPPs in Social Housing Regeneration. *Combat Poverty Agency Working Paper Series 09/07* , 1-12.

Helios Healthcare International. (2012). *Hospitals: Helios Healthcare International*. Retrieved May 28, 2012, from Helios Healthcare International: <http://www.helios-healthcare.com/hospitals/berlin-buch/berlin-buch.html>

HM Treasury. (1995). *Private opportunity, public benefit, progressing the PFI*. London: Private Finance Panel.

Hospital Braga. (2001). *The Hospital: Hospital Braga*. Retrieved May 25, 2012, from Hospital Braga: <http://www.hospitaldebraga.com.pt/PT/o-novo-hospital?redir=5.15>

House of Commons Treasury Committee. (2011). *Private Finance Initiative: Written Evidence*. London: House of Commons Treasury Committee.

Investopedia. (2012). *Economics: Rent-Seeking*. Retrieved May 28, 2012, from Investopedia:  
<http://www.investopedia.com/terms/r/rentseeking.asp#axzz1wCxAPMT0>

Investopedia. (2012). *Terms: Asset-Stripping*. Retrieved May 28, 2012, from Investopedia:  
<http://www.investopedia.com/terms/a/assetstripping.asp#axzz1wCxAPMT0>

IPPR. (2011). *Building Better Partnerships*. London: Institute for Public Policy Research.

John Laing plc. (2005, October 20). *News: John Laing plc*. Retrieved May 28, 2012, from John Laing Web site: <http://www.laing.com/news/97/115/Speech-by-Andy-Friend-CEO-John-Laing-at-PPP-Transport-Summit.html>

Kamath, A. (2001). *Forum: Are we ready for Public Private Partnerships?* . Retrieved May 28, 2012, from Express Healthcare Web site: <http://www.expresshealthcare.in/200701/strategy05.shtml>

Kappeler, A., & Nemoz, M. (2010). *Public Private Partnerships in Europe - Before and during the recent financial crisis*. Luxembourg: European Investment Bank.

Klein Woolthuis, R., Hillebrand, B., & Nooteboom, B. (2005). Trust, contract and relationship development. *Organization Studies* , 26 (6), 813-840.

Koppenjan, J. F. (2005). The formation of public private partnerships: lessons from nine transport infrastructure projects in the Netherlands. *Public Administration* (83 (1)), 135-157.

Kwak, Y. H., Chih, Y., & Ibbs, C. W. (2009). Towards a Comprehensive Understanding of Public Private Partnerships for Infrastructure Development. *California Management Review* , 51 (2), 51-78.

Laursen, T. (2006, June 8). Managing Fiscal Risks in PPPs. *The World Bank: Public-Private Partnerships and Collaboration in Health Workshop* . Vilnius, Lithuania.

Lovell, R. (2008). Centro Hospitalar de Cascais PPP, Portugal. *PPP/PFI, Infrastructure Journal* .

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)), pp. 471-485.

Lyons, B., & Mehta, J. (1997). Contracts, opportunism and trust: self-interest and social orientation. *Cambridge Journal of Economics* (21), pp. 239-257.

Ministry of Industry and Trade of the Czech Republic. (2011). *Public Private Partnership*. Retrieved May 28, 2012, from Business Info CZ: <http://www.businessinfo.cz/cz/rubrika/public-private-partnership-ppp/1001135/>

Mitchell, M. (n.d.). *Harvard School of Public Health*. Retrieved April 2, 2012, from Harvard University Web site: <http://www.hsph.harvard.edu/ihsg/publications/pdf/PPP-final-MDM.pdf>

Mitchell, M. (2000). *Harvard School of Public Health*. Retrieved April 2, 2012, from Harvard University Web site: <http://www.hsph.harvard.edu/ihsg/publications/pdf/PPP-final-MDM.pdf>

Montero, R. S. (2007, March 7). PPP and fiscal risks. Budapest, Hungary: IMF.

New South Wales Treasury. (2004). *Total Asset Management: Life Cycle Costing Guidelines*. Sydney: New South Wales Treasury.

NHS Confederation. (2011). *The search for low cost integrated healthcare: The Alzira model from the region of Valencia*. Brussels: NHS European Office.

Nikolic, I. A., & Maikisch, H. (2006). *Public Private Partnerships and Collaboration in the Health Sector; An overview with case studies from recent European Experience*. Washington: The World Bank.

Nisar, T. M. (2006, November 6). Risk Management in Public Private Partnership Contracts. *Public Organization Revue* , pp. 1-19.

OECD. (2006). *Interim report on the role of private participation in major infrastructure provision*. Paris: OECD.

Parker, D., & Hartley, K. (2003). Transaction costs, relational contracting and public-private partnerships: a case study of UK defence. *Journal of Purchasing and Supply Management* , 97-108.

PWC. (2010). *Build and Beyond: The (r)evolution of healthcare PPPs*. Health Research Institute PWC.

Quiggin, J. (2003, December 8). Risk, PPPs and the Public Comparator. *Public Private Partnerships Forum* . Sydney: The Accounting Foundation, The University of Sydney.

Rechel, B., Erskine, J., Dowdeswell, B., Wright, S., & McKee, M. (2009). *Capital investment for health: Case studies from Europe*. European Observatory on Health Systems and Policies. Copenhagen: World Health Organization.

Savas, E. (2002). *Privatization and Public Private Partnerships*. New York: Chatham House.

Scotsman.com. (2008, October 8). *News: Non-profit distribution' could be shape of things to come. Here's how it works*. Retrieved May 28, 2012, from Scotsman.com: <http://www.scotsman.com/news/non-profit-distribution-could-be-shape-of-things-to-come-here-s-how-it-works-1-1136180>

Segal, I. (1999). Complexity and Renegotiation: A Foundation for Incomplete Contracts. *Review of Economic Studies* , 57-82.

Silalertruksa, T., Bonnet, S., & Gheewala, S. H. (2012). Life cycle costing and externalities of palm oil biodiesel in Thailand. *Journal of Cleaner Production* , 225-232.

Simoes, J. A. (2005, April 21). Public-Private Partnerships in Healthcare: The Portuguese Approach to Health PPP's. *Conference "PPP in the Health Service"*. Prague, Czech Republic: Ministry of Health of Portugal.

Standard and Poor's. (2005). *Standard & Poor's PPP Credit Survey 2005*. London: Standard & Poor's.

Taylor, R., & Blair, S. (2002, January). *Publications: International Finance Corporation*. Retrieved April 12, 2012, from International Finance Corporation: [http://www1.ifc.org/wps/wcm/connect/69839a00498390a682bcd2336b93d75f/VP\\_Public%2BHospitals%2BPPPs.pdf?MOD=AJPERES&CACHEID=69839a00498390a682bcd2336b93d75f](http://www1.ifc.org/wps/wcm/connect/69839a00498390a682bcd2336b93d75f/VP_Public%2BHospitals%2BPPPs.pdf?MOD=AJPERES&CACHEID=69839a00498390a682bcd2336b93d75f)

The Canadian Council for Public Private Partnerships. (2012). *Public Opinion and Communications*. Retrieved April 22, 2012, from The Canadian Council for Public Private Partnerships Web site: <http://www.pppcouncil.ca/resources/issues/public-opinion-and-communications.html>

The Global Health Group. (2010). *Public-Private Investment Partnerships for Health: An Atlas of Innovation*. San Francisco: University of California, San Francisco.

Treasury Taskforce Private Finance. (1998). *Policy Statement No.2: Public sector comparators and value for money*. London: HM Treasury.

Uzzi, B. (1997). Social structure and competition in interfirm networks: the paradox of embeddedness. *Administrative Science Quarterly*, 35-67.

Velloso, R. (2009). Fiscal Risks: Sources, disclosure and management. IMF Fiscal Affairs Department.

Walsh, K. (1995). *Public services and market mechanism - competition, contracting and the new public management*. Hampshire: MacMillan.

Williamson, O. E. (1985). *The Economic Institutions of Capitalism*. New York: Free Press.



Wilton Park. (2008). Public private investment partnerships in health systems strengthening. (pp. 1-19). Sussex: Wilton Park.

World Health Organisation. (2000). *World Health Report 2000*. Geneva: World Health Organisation.

Yana, S. H. (2005, July 11). Origines et développements des partenariats privé-public en santé dans les pays développés : principes, enjeux et défis institutionnels. *La Revue de l'innovation* , pp. 1-13.

Zand, D. E. (1972). Trust and managerial problem solving. *Administrative science quarterly* , 17 (2), 229-239.

Zheng, J., Roehrich, J. K., & Lewis, M. A. (2008). The dynamics of contractual and relational governance: Evidence from longterm public-private procurement arrangements. *Journal of Purchasing and Supply Management* , 43-54.

Zhou, K. Z., & Poppo, L. (2006, February 24-25th). Relational Contracts in China: relational governance and contractual assurance. *First Annual Conference on Institutional mechanisms for Industry self-regulation* . Hanover, NH.