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Are We There Yet? The Length of the Tendering Period under PPP in Ireland

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Abstract

The relative complexity of procurement under PPP means that tendering periods can be longer compared to traditional procurement models. Reducing the tendering period is therefore an important challenge if Public-Private Partnership (PPP) is to deliver infrastructure on time and within budget. Using data from 59 PPP projects in Ireland we find that the average tendering period has been 33.3 months. Regression analysis shows that tendering periods have fallen over time and are positively but not strongly associated with the capital value of projects. Tendering periods are longer for projects that do not involve private finance with the majority of such projects procured by local authorities. We use a case study of PPP procurement by a local authority to explore these issues further. The 'Dublin Waste to Energy' PPP shows the complex array of factors that can impact on tendering periods some of which are outside the control of the procurement authority.

Keywords: Public-private partnerships, procurement, tendering periods, Ireland, Incinerator

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Introduction

The commonly stated objectives of public authorities procuring new infrastructure is ensuring that projects come in 'on time' and 'within budget'. However, the challenges involved in meeting these objectives, to say the least, are onerous. In a now seminal series of publications on procuring large infrastructure projects, Flyvbjerg *et al.* (2002, 2003a, 2003b, 2004, 2011) provide what they claim to be the first ever statistically significant study of cost performance in transport infrastructure projects worldwide. They found that large infrastructure projects (i.e. those costing a hundred million dollars or more) were characterised by cost overruns (in nine out of ten cases), benefit shortfalls and time delays.

Flyvbjerg (2011:323) notes that the literature provides a number of common explanations for project underperformance including: "project complexity, scope changes, technological uncertainty, demand uncertainty, unexpected geological features, and negative plurality (i.e. opposing stakeholder voices)". However, he argues that while these factors do indeed contribute to underperformance they are not the real, or root, cause. The root cause of underperformance is the fact "that project planners tend to systematically underestimate or even ignore risks of complexity, scope changes, etc. during project development and decision-making" (2011:323). In other words the root cause of underperformance is optimism around features that apply to most large infrastructure projects.

To meet the challenge of improving the procurement of infrastructure, governments around the world are encouraging greater private sector participation and the adoption of different forms of Public-Private Partnerships (PPPs). Compared to traditional procurement methods the potential benefits from private sector involvement include: better risk management, better incentives for performance, mitigation of problems around the lack of clearly defined roles for those involved in major infrastructure projects and amelioration of problems with rent-seeking behaviour by private sector interests. It is, however, worth noting that Flyvbjerg *et al.* emphasise that other problems with traditional procurement such as under-involvement of the general public and lack of identification of public interest objectives will not be solved by greater private sector participation (Flyvbjerg *et al.*, 2003a:105).

There is evidence to support the case for PPP as a means of reducing cost and time overruns on infrastructure projects. The National Audit Office (NAO) in the United Kingdom compared the construction performance of 37 PFI projects to the historical performance of infrastructure projects delivered through conventional procurement (NAO, 2003). It was found that 73 per cent of traditionally procured projects experienced cost overruns compared to 22 per cent of Private Finance Initiative (PFI) projects. The NAO also reported that 70 per cent of traditionally procured projects were delivered late while the corresponding figure for PPP was only 24 per cent (NAO, 2003).

Another UK-based study by Mott MacDonald (2002) examined the performance of 50 large infrastructure projects each with costs exceeding £40m in 2001 prices. The study compared the planned and actual performance of the projects and found that projects using traditional procurement exceeded their planned construction completion time by an average of 17 per cent while PFI projects were completed early by an average of 1 per cent. In terms of costs, traditionally procured projects exceeded their planned capital costs by an average of 47 per cent compared to virtually zero for PFI projects.

These studies are quoted in a recent review of the international evidence by Lammam *et al.* (2013) who also examined similar studies from Canada, Australia and the UK. The tenor of these studies is broadly similar and the authors' overall conclusion is that "comparisons of performance during the construction phase…shows that P3s outperform conventional procurement by lowering construction costs and shortening completion times (Lammam *et al*., 2013: 17).

The aforementioned studies provide important evidence of improved project performance under PPP. However, the focus of these studies is on the interval between contract award and the completion of construction and they largely ignore the tendering period (i.e. the interval between contract notice and award). It is widely recognised that PPP projects are characterised by features that lead to longer tendering periods compared to other forms of procurement. PPP contracts are long term arrangements between the public and private

sectors with agreements normally exceeding twenty years. Moreover, PPP contracts cover different elements of the project life cycle (i.e. design, build, financing and operation of new assets) which necessarily increases the relative complexity of the procurement process and has the potential to increase uncertainty around the project. Longer tendering periods can have important implications for PPP projects as they can lead to increased transaction costs thereby reducing the economic benefit. Moreover, the perception that PPP projects involve lengthy tendering periods may deter bidders, thereby reducing competition for contracts and the potential for lower costs and better value for money under PPP.

This paper is framed in the context of these issues. The paper focuses on the issue of tendering periods and examines the performance of PPP procurement in this regard. It focuses on the case of Ireland where PPP has played an increasing role in public capital investment since the late 1990s. The paper is structured as follows: a brief review of Ireland's PPP programme is followed by a discussion on tendering periods and the comparative experience in the UK. We then move on to describe our data which forms the basis for our analysis of tendering periods for PPP in Ireland. Following the presentation of our results we provide an in-depth case study analysis of a large scale PPP in Ireland – the Dublin Waste to Energy project – which was announced in 1999 and has yet to commence construction. Our objective is to use the details in this case study to shed light on some of the complexities of PPP procurement that lie beneath the data used in our quantitative analysis of tendering periods.

Background: PPP in Ireland

The First 10 Years – 1999-2009

The origins of PPP procurement in Ireland can be traced back to the acute nature of Ireland's deficit of physical infrastructure that became more and more pressing as the country entered into a period of rapid economic growth in the mid-1990s. The urgent need to deliver infrastructure in areas such as roads, public transport and environmental services provided an opportunity for private interests to make the case for more extensive involvement in the financing and delivery of infrastructure assets, as well as increased involvement in the delivery of public services on the back of these assets.

Initially the Irish government adopted a cautious approach, announcing eight pilot PPP projects in 1999. However, the PPP model quickly gained favour amongst relevant policy makers and when the *National Development Plan 2000-2006* was published in November 1999 it stated that the urgent need to deliver infrastructure was such that the PPP programme would be expanded before pilot projects were completed. Over the following months the envisaged level of PPP activity expanded rapidly. By May 2001 over 70 PPP projects were listed on the website housed by the *Central PPP Unit* in the Department of Finance. In June 2001, a report commissioned by the Department of Finance, described how Ireland's PPP programme had progressed from the stage of mobilisation to expansion and that there were 134 PPP projects at different stages of development (Reeves, 2003).

Despite the fact that more and more projects were nominated for procurement under PPP, progress in the early years was slow. By mid-2003, four years after the announcement of the pilot projects, the procurement process had been completed in just three cases (excluding water services), two of which were in the schools sector (Reeves 2003). At this point the PPP programme was the subject of strong criticism from the private sector with respect to aspects such as the extent of deal flow, the level of public sector skills in the context of procuring PPPs and the costs involved in bidding for PPP contracts (Reeves, 2008). Data on PPP activity provided by the Department of Finance's Central PPP Unit showed that by mid-2009 there were only six projects (excluding water service projects) in operation. Although a number of roads PPPs were close to completion it was apparent that in the first decade of Ireland's PPP programme the duration of the procurement and construction processes was substantial. Notwithstanding the evident delay in bringing projects through the procurement cycle and onto the point of operation, the government's enthusiasm for PPP procurement has remained steadfast. Prior to the current economic crisis, the Multi-Annual Capital Investment Framework 2008-2012 (see table 1) shows that PPP investment was expected to account for 16 per cent of planned investment over the period 2008-2012.

Post economic crisis 2008

The current global and domestic economic crisis has impacted enormously on the extent and composition of Ireland's PPP programme. Although service commenced on seven road PPPs in 2010, a large number of PPP projects have been put on hold or abandoned since 2008. On the basis of comparing Department of Finance project updates for May 2009 and September 2012 it is possible to identify 26 projects that were suspended or abandoned. Almost all of the 26 cases identified included private finance which had become scarce and more expensive in the wake of the global financial crisis. Among the more high-profile projects put on hold or abandoned are large-scale rail projects in the Dublin area (Metro North and Dart Underground), the Dublin Waste to Energy contract (Poolbeg Incinerator), a number of social housing projects as a well as contracts to provide buildings in third level education institutions.[1]

Notwithstanding these difficulties the prospects for further procurement under PPP received a major boost in July 2012 following the announcement of a new 'Stimulus Plan' for the Irish economy. A number of suspended projects were re-instated (e.g. two road projects – M11 Gorey-Enniscorthy and N7/N18 Gort-Tuam) while a new set of PPP projects were announced. The latter includes new roads (e.g. N25 New Ross Bypass), 30 new primary care centres, a new State Pathology Laboratory, two new schools bundles and a campus for the Dublin Institute of Technology. Table 2 provides the latest available data on PPP projects combining the last update from the Department of Finance (September 2012) and the projects announced in the 'Stimulus Plan'. It shows that by September 2012 there were 43 PPP projects in operation and another 40 projects either under procurement or construction. The majority of PPP projects are in the water services sector where the Department of Environment, Heritage and Local Government (DOEHLG) has nominated the DBO model as its preferred procurement model for water and wastewater treatment facilities.

[1] The C&AG (2012) showed that the costs already incurred on cancelled projects amount to €229.2 million (including €56.78 for enabling works that would be incurred if traditional procurement was chosen).

An indication of the magnitude of investment under PPP to date is provided in the annual report of the Comptroller and Auditor General (C&AG). The data in table 3 shows that over €2.3 billion of exchequer funding had been committed to PPP projects by the end of 2011. Moreover, there are commitments of over €4 billion outstanding on 37 PPP contracts (with most of this expenditure spread over the relevant contract durations).

Overall, it is evident that PPP has made an appreciable contribution to the creation of capital stock and delivery of public services in Ireland. It is also apparent that the level of PPP investment is set to rise as the Irish government has placed PPP investment at the heart its modest plans for an investment stimulus for the Irish economy. Nevertheless, the experience to date shows that procurement under PPP has not been smooth, with a host of PPP projects cancelled in the context of the banking crisis, and the delivery of PPP projects has been characterised by lengthy periods of planning and procurement. The slow progress in terms of bringing PPP projects to the point of operation raises questions about the performance and suitability of the model. This is particularly true in the Irish context where the official rationale for the adoption of PPP explicitly refers to "speedy, efficient and cost-effective delivery of projects" as one of the goals and benefits of PPP (Department of Finance, 2001: 3). This paper focuses on the duration of the tendering process under PPP in the Irish case. Before describing our data and presenting our analysis we briefly examine the available evidence on tendering periods for PPP in the UK.

Tendering periods for PPP: evidence from the UK

It is widely recognised that PPP projects are characterised by features that lead to longer tendering periods compared to other forms of procurement. As PPP contracts are long-term and combine elements such as design, build, financing and operation of new assets, the relative complexity and uncertainty of PPP projects is high. International comparative evidence on the procurement times for PPP is difficult to assemble due to differing legal systems, cultural behaviours, interpretation of EU regulations and pre- and post-procurement processes. However, in a recent review of PFI in the UK, HM Treasury (2012) finds that the UK (the world leader in PPP procurement) appears to have slower times compared to other European countries and significantly slower procurement timelines than

Canada. It finds that average procurement times (from initial project tender to financial close) have remained around 35 months (1997-2007). There has been variety across sectors with an average time of 22 months recorded for schools but significantly longer times recorded in the housing and waste sectors (HM Treasury, 2012:38).

Some of the additional procurement time can be necessary as well as being highly beneficial to an overall project. Shorter procurement periods may not be desirable if they are achieved at the expense of value for money (VFM). However, lengthy procurement periods can be correlated with higher transaction costs which undermine the prospects for achieving VFM under PPP. In addition, complex and lengthy procurement periods have the potential to deter private sector bidders, thereby reducing the competitive tension that is fundamental in terms of achieving VFM under PPP. The National Audit Office (NAO) in the UK conducted a study of all Central Government Department PPPs that closed between April 2004 and June 2006 and found that there were

> "[S]igns that the private sector is becoming more selective in developing detailed bids for PFI projects, in part due to the cumulative impact of lengthy tendering periods and high bid costs. One in three projects that closed between 2004 and 2006 had two detailed bids competing for the business, compared with one in six authorities prior to 2004" (NAO, 2007:5).

In this context, one of the principal objectives under the re-vamped Private Finance Initiative (PF2) in the UK is to impose a cap of 18 months on the procurement period measured from the issuance of the project tender to the appointment of the preferred bidder.

Tendering periods in the case of Ireland

Concern has also been expressed about the duration of the PPP procurement period in Ireland. The National Development Finance Agency (NDFA), which is the delivery agent for state authorities for PPPs (except transport and regional authorities), has set explicit targets for PPP procurement in the context of the current stimulus package. The target reduction in

procurement periods is set between 15 (in the case of schools) and 18 months from the OJEU (Open Journal of the European Union) notice to the contract award/financial close and a number of measures have been taken to assist in meeting these targets. These include the development of specimen/exemplar designs for repeat building types (schools, primary care centres), publication in advance of indicative capital budget, reduced submissions and the elimination of the draft tender submission stage (Murphy, 2013).

Although the adoption of these targets and measures is clearly based on concerns about the length of the tendering period under PPP, we are unaware of any systematic analysis of this aspect of PPP procurement in the Irish context. This study aims to address this question by gathering data on tendering periods for Irish PPPs and presenting an analysis of this data in order to establish an understanding of the factors that determine the length of the procurement period.

Data collection

We collected data concerning tendering periods and other relevant factors for 59 Irish PPP projects. The tendering period was measured as the number of months between the date of contract notice and contract award/financial close. The data covers the period 1997 (first contract notice) to 2013 (when the most recent contract was signed). The dates of contract notice and contract award were sourced from *etenders.gov.ie* and *mytenders.ie*.[2] This data was available in most cases where the contract notice was posted after May 2004. For some pre-2004 cases it was necessary to source data from other public sources.[3]

The data indicates that the average tendering period for all projects was 33.3 months (SD = 13.4) which is slightly below the average of 35 months recorded in the UK over the period 1997-2007 (NAO, 2007). There is some evidence of a reduction in tendering periods over

[2] *Etenders.gov.ie* is the website of the National Procurement Service in Ireland where all public sector contracting authorities advertise procurement opportunities and award notices. *Mytenders.ie* is a privately-run website that publishes every tender and contract award notice procured by Irish public sector contracting authorities.

[3] Other sources included publicly available documents (e.g. reports by the C&AG) and the websites of individual procurement authorities (e.g. the National Development Finance Agency, National Roads Authority, local authorities etc.). In a limited number of cases it was necessary to rely on reports in national and local newspapers to determine the date of contract award.

the period covered (see figure A2). The breakdown of projects in terms of sector and PPP type (concession, DBO etc.) is given in table 4. The data indicates some noteworthy variation across sectors where PPP is adopted. The procurement times for fixed links (tunnels and bridges) projects, the National Convention Centre and the Poolbeg waste incinerator project were markedly higher than the overall average, whereas procurement times for court services and housing projects were notably lower.

An important question that arises under PPP is whether or not procurement practices are improving over time resulting in shorter tendering periods. Our data (see figures A1-A4) provides evidence of reductions in tendering periods for roads (mean = 32.6) and water/wastewater (mean = 35) but not for education projects (mean = 30.5). The data also indicates no direct correlation between the time it takes to tender a deal and the capital value of a deal (see figure A5).

To add to our analysis we used a simple OLS regression analysis to examine the relationship between the duration of the tendering period and three explanatory variables. The dependent variable in the model is specified as a count variable indicating the number of months from the date of issuance of contract notice to the date the contract was signed (i.e. tendering period). The independent variables (specified in table 5) include the capital value of the project and time period dummy variables. In addition, the model includes a dummy variable for contract type which is divided between PPPs that include private finance (e.g. DBOF, Concession) and PPPs that are financed from the public budget (i.e. DBO).

The regression results are presented in table 6 and indicate that PPP projects that did not include private finance had significantly longer tendering periods relative to PPPs that included private finance. We specifically find that when we control for the capital value of the project and the time period involved, a non-private finance project took nearly nine months longer to complete. We also find evidence that the higher the capital value of a project, the longer the time to complete the tendering process, although the magnitude does appear small. The estimates also indicate that the period in which the project was advertised was important in determining the length of the tendering period, controlling for

project type or capital value. We find that projects advertised in the period 1997-2003 took almost nine months longer to complete compared to projects advertised in 2007 or later. There is no statistically significant difference in tendering periods between the 2004-06 and post-2007 periods, a result that suggests that the length of the tendering process has improved over time despite the impact of the global and domestic financial crisis.

In addition, we extend the analysis of our results by considering the impact on tendering period for PPP type (private finance versus non-private finance) and capital value as the date of contract notice is allowed to vary. The rationale for this exercise is to investigate how sensitive the tendering period in the three separate time periods used is to either PPP type or capital value. Tables 7 and 8 display the results of these estimates for PPP type and capital value respectively, providing the marginal effect of changing these variables on tendering period as we vary the time period involved. The results in table 7 show that changing from a private finance to a non-private finance type project would increase the tendering period by 13.5 months if the project was advertised between 1997-2003; however, making the same change in the 2004-2006 period would lead to an increase of 11.3 months. In the most recent time period, there is no significant difference in time to contract award between non-private finance and private-finance project types.

Table 8 shows the marginal effect of increasing the capital value of a project on tendering period across our three time periods where we can see that increasing the capital value of a project would lead to a longer tendering period in the earliest and latest time periods. However, the size of the coefficients indicates that the tendering period was most sensitive to changes in the value of the project in the most recent time period. We can interpret these coefficients as indicating that a €10m increase in the capital value of a project increases the tendering period by 1 month if the project was advertised in 2007 or after. The same increase in capital value would increase the tendering period by a 1/3 of a month if the contract was advertised between 1997 and 2003. The time period 2004-2006 does not present as statistically significant in this analysis.

Our findings shed interesting light on the tendering period for PPP projects. Of particular note is our finding that PPP projects that do not involve private finance have significantly longer tendering periods. This may appear counter-intuitive but it is worth noting that all non-private finance PPPs are those that were procured as DBOs in the water services sector. These projects are procured by individual local authorities, whereas PPPs involving private finance are, in most cases, procured by specialised procuring agencies (e.g. National Roads Authority and National Development Finance Agency). It is plausible to assume that agencies whose main function is procurement are better equipped to manage tendering processes compared to local authorities. The results derived from using interacting variables (tables 7 and 8) lend support to this explanation and also suggest that tendering periods for PPPs based on private finance are reducing over time.

The inference that we can draw from our results that suggests less efficient PPP procurement by local authorities is worthy of further examination. There is some evidence of problems with PPP procurement of water service projects (Reeves, 2011) and social housing PPPs (Hearne, 2009). To examine the question of PPP procurement by local authorities further it is instructive to use a case-study approach. In the following section we examine the procurement of one of the biggest local authority PPPs in Ireland to date.

Dublin Waste to Energy (Poolbeg) PPP

The PPP contract to build an incinerator for the purpose of processing waste in the greater Dublin area remains one of the most protracted and controversial PPP projects to date in Ireland. The procurement process (as distinct from the tendering process) has now run for over a decade and construction of the facility has yet to commence.

Prior to the mid-1990's Ireland relied almost entirely on landfill as a means of disposing of waste. The objective of reducing dependence on landfill resources provided an important context for the 1996 *Waste Management Act,* which included provisions for waste prevention, recycling, energy recovery, and the establishment of the "Polluter Pays" principle. Shortly after the enactment of the Act, a 'waste to energy facility' was proposed as an integral part of Dublin's Regional Waste Management Plan which was launched in

1998. As local government in Dublin is separated into four local authorities, the decision was taken to appoint Dublin City Council (DCC) as the lead authority in the procurement of the new infrastructure.

It was decided to procure the new facility as a PPP and the project was included as one of the pilot PPP projects announced in June 1999. In December 1999 a site at Poolbeg in Dublin was identified as the optimal location for the facility which was initially planned to process 450,000 tonnes of waste per annum. The contract notice was posted in the OJEU in July 2002 and a formal contract award made in May 2007 (58 months after the contract notice). The principal reason for this delay concerned the fact that the preferred bidder (Elsam AS) appointed in April 2005 was taken over by a separate company (DONG - Danish Oil and Natural Gas) in September 2006, who subsequently queried the viability of the project and announced it was not able to meet the terms of the PPP.[4] In January 2007 (54 months after contract notice) DONG sought to introduce Covanta, a US waste management Company, as a partner on the contractor side of the PPP. In May 2007 (58 months after contract notice) the Project Board approved the proposal from Covanta/DONG (now called DWEL) who were awarded the contract for the project "in accordance with the original sanction" (Local Authority Audit Service, 2011: 16). The new contract was for the design, build, operate and finance of a 600,000 tonne incinerator. The fact the final contract was awarded to an entity that did not make an original bid has been the subject of a complaint to the European Commission and remains under review.

A complex set of factors around the politics of the project served to contribute to the significant delays in the tendering period and wider procurement process. Murray (2006) notes how opposition to incineration and super-dumps is widespread in Ireland. This opposition has been a feature of this project from the outset. In a pre-emptive strike against such opposition the Minister for the Environment introduced the *2001 Amendment to the Waste Management Act (1996)*. This hugely controversial change in waste policy allowed decision-making powers on waste policy to be removed from locally elected representatives (previously one of the few 'reserved functions' of councillors) and given to

[4] McDonald, F. Poolbeg Timeline, *Irish Times*, August 11, 2011.

county or city managers (who are unelected officials). This paved the way for the adoption of regional waste strategies across Ireland, including, crucially, provisions for the building of incinerators. Although DCC (one of the four local authorities seeking to advance the project) voted in September 2004 against the PPP incinerator going ahead, the council's management used its powers under the *2001 Act* to proceed with the procurement process.

While the potential resistance from elected local authority councillors was effectively headed-off, the project encountered a further series of serious setbacks following the General Election of May 2007 which resulted in the Green Party entering government for the first time (as a minor coalition party). The Green Party leader, Mr. John Gormley, was appointed as Minister for the Environment in the new government. Gormley was a long standing opponent of the project which was to be constructed in his constituency and, while the Minister was de-barred from interfering with the independent planning process, he began to review options for halting the project.[5] The Minister took three principal measures which served to obstruct the project and increase levels of uncertainty around the procurement process.

1. In June 2009 the Minister issued a draft directive under the *1996 Waste Management Act* seeking to cap the volume of municipal waste that could be sent for incineration. The Department of Environment stated that one of the objectives of the proposed Section 60 policy direction was to ensure that "incineration capacity does not reach a level such that waste is drawn to incineration which could have been dealt with by prevention, reuse, recycling, composting/anaerobic digestion of source segregated biowaste, MBT or other methods higher up the waste hierarchy" (quoted in Gorecki *et al*. 2010:43).[6]
2. In March 2010 the Minister proposed waste-disposal levies of up to €120 per tonne for incineration and landfill. This proposed measure increased uncertainty around

[5] Full planning permission (subject to 13 conditions) for the project was granted in November 2007 (64 months after contract notice). However, in March 2010 (93 months after contract notice) it was discovered that the contractor required a foreshore licence.

[6] The proposed cap was designed to ensure that the aggregate capacity of licensed incinerators should not exceed 30% of municipal solid waste arisings, and from 2015 should not exceed 25% of municipal solid waste arising (Gorecki *et al.*, 2010:44).

the viability of the plant and the contractor's (Covanta) prospects of raising finance for the project.

3. In March 2010 the Minister appointed a Senior Counsel to head an independent inquiry into the financial implications faced by DCC of the contract to build and operate the contract. Among the risks examined by the inquiry was the cost that may be incurred by DCC if it fails to supply 320,000 tonnes of waste to the 600,000 capacity facility.

The measures taken by the Minister created significant uncertainty around the government's commitment to the contract. This added to the doubts that had emerged about the capacity of the DCC to ensure that sufficient levels of waste could be supplied to the incinerator. The source of this uncertainty was attributable to the fact that local authorities in Dublin had previously ceded full control of waste collection in the city by privatising the collection of waste. However, privatisation was not based on a formal contract and the local authorities were left with no mechanism for regulating the disposal of collected waste. The local authorities therefore sought to take rear-guard action by imposing stricter regulation over the market for waste collection. The ultimate purpose of this action was to control the disposal of waste and direct sufficient levels of waste to the incinerator. To achieve this objective, the local authorities made a variation in the waste management plan for the region under which the local authorities would collect waste themselves or they would contract with a single private provider. However, in March 2009, the variation in the plan was quashed by the High Court on the grounds that it would breach competition law and constitute abuse of the local authority's dominant position in the household waste collection market in a bid to remove rival private operators.

These events and measures have combined to ensure that the Poolbeg project, which was announced as a PPP in 1999, remains on hold. Although the new Minister for the Environment dropped his predecessor's proposed levy on incineration in July 2011, construction of the facility remains suspended as the contractor has faced difficulties in accessing finance. In addition, the DCC has been engaged with the European Commission due to complaints concerning state aid and possible breaches of procurement law.

Discussion of the Poolbeg PPP

The drawn-out saga of the *Dublin Waste to Energy PPP* represents one of the most controversial procurements under PPP to date. The details of this case demonstrate the complex set of factors that have contributed to the delays observed, some of which were beyond the control of the procuring local authority. As it is now over a decade since the contract was first advertised there have been significant transaction costs borne by all parties. The costs to the public sector were recently published by the Local Government Audit Service (LAGS) and it provides useful insights into problems with public management of complex projects and the inefficiencies caused by considerable delays in procurement. The LAGS reports that the expenditure incurred to date on the incinerator project has amounted to €81.75m. In addition, the expenditure on the District Heating element of the waste to energy project has amounted to €10.03m.

Some of these costs would have been incurred regardless of whether the project was procured as a PPP or using the traditional approach. These include site purchase costs and the costs of relocating other businesses where sites were purchased under compulsory purchase orders. The data provided by LAGS, however, provides information on other categories of cost where magnitudes have increased considerably due to the prolonged procurement process as well as deficiencies in project management by DCC. Of particular note were the costs paid to the Client Representative which amounted to €28.4m compared to the original contract of €8.3m.

One of the principal factors that have contributed to delays the in procurement of the Poolbeg incinerator has been the considerable uncertainty over the principal terms of the agreement, which have not been made available to the public or the sponsoring Minister.[7] Concerns over the risks taken by the public sector provided one of the reasons for the then Minister's appointment of an independent review into the terms of the contract in March 2010. Of particular concern to the Minister was the implication of the risk transfer provision

[7] It was also reported that DCC refused to disclose the terms of the contract to the Minister for the Environment on the grounds that it was contrary to its commercial interests (Leahy, P. and Burke, J. *Sunday Business Post*, December, 27th, 2009).

known as the 'put or pay clause' in the contract. This is a standard contractual model in the case of disposal agreements between municipalities and waste incinerators, where the contractor needs assured supplies of inputs at a set price in order to meet production targets. The client must deliver a certain amount of inputs or pay for the shortfall. Constantino and Pellegrino (2010) comment that in such agreements the correct evaluation of risk borne by the community is needed. However, they emphasise that such agreements can be very risky for communities as they require an estimate of the amount of waste generation for the next 5, 10, 15 or 20 years from now. In order to mitigate the risks to the client a specific clause is required. Constantino and Pellegrino (2010) assert that a commonly used clause involves the client being relieved of making a payment if other suppliers can fill the gap in the case of any shortfall. It is not known if such mitigation clauses apply in the Poolbeg case.

In the case of the Poolbeg incinerator therefore, there were reasonable grounds for public concern about the precise terms of the 'put and pay' contract and the details of the risk-sharing agreement. The prospects for efficient contracting were however undermined by the lack of transparency about the precise obligations of the public sector client, with the relevant Minister facing difficulty in accessing information in this regard. Nevertheless, it is still difficult to avoid the conclusion that the measures adopted by the Minster were characterised by a degree of opportunism (Williamson, 1975).

> "Investment in a specific asset like an incinerator involves significant levels of sunk costs. An asset such as an MSW incinerator has little value outside its original intended use or location. Once a contractor makes an investment under these conditions they become vulnerable to opportunistic behaviour (hold-up) by their contracting partners. In effect, the customer could insist on paying only marginal cost for use of the facility, rather than allowing the project developer to recover its capital cost as well. In other words the buyer seeks to extract quasi-rents. The developer may have no choice but to accept this thereby losing most of their equity in the project" (Gorecki et al, 2010: 16).

Spiller (2010) refers to such behaviour as 'governmental opportunism which can be done in a variety of subtle (e.g. changing the rules of the game) and not so subtle (e.g. expropriation of assets) ways. The implications of governmental opportunism as outlined by Spiller outlines are relevant to the case of the Poolbeg incinerator. Governance schemes that do not limit the potential for governmental opportunism, then, create strong inefficiencies and poor sector performance. Poor quality, lack of investments, and high prices lead, eventually, to more conflicts between the operator and the government (Spiller, 2010: 150).

The focus in this paper is on the duration of the tendering period which in this case was almost five years, more than two years longer than the average observed for the sample of Irish PPPs used in this paper. While the period before the appointment of the preferred bidder was well above the average observed in other PPP projects (33 months), the subsequent stage of the tendering period was extraordinarily long and can be largely attributed to the fact that the preferred bidder was taken over by a separate company that subsequently sought to re-negotiate the original terms of the agreement. One of the factors that therefore contributed to the delay in the procurement period was the use of a 'negotiated procedure'. This approach to procurement allows scope for the preferred bidder to use its near-monopoly status to seek better terms over the period between securing preferred bidder status and final contract award. The dangers of opportunistic behaviour by the preferred bidder at this stage have been highlighted in the UK where Pollock (2009) found that

> "the procurement process is so complex that years can elapse between the selection of the preferred bidder and the final sign-off on the contract. During that period the contract itself together with the costs changes dramatically, and all in the absence of any competition. Our research shows how PFI hospitals on average almost double in costs, with significant changes to the design and specification".[8]

[8] Pollock, A. (2009) "Uncovering the True Costs of PFI", *The Guardian*, 23 September, available at: http://www.guardian.co.uk/commentisfree/2009/sep/23/pfi-construction-bid-rigging.

Another issue that arose in the Poolbeg case concerns the uncertainty about supply levels to the facility which was attributable to the lack of regulation in the market for waste collection in the relevant local authorities. The subsequent problems resonate with the contribution of planning specialist Eliot Sclar (2010). In his critique of models of infrastructure privatisation such as PPP, he states that

> "Because the interests of the private partners in the placement of infrastructure and their concerns about protecting their revenue streams come to dominate the local discourse the planning approach begins to shift from one in which a comprehensive view of the urban space is replaced by one that views the space as a collection of individual projects that each have to be nurtured separately in terms of the rates of investment return that are pledged to the private owners of the concession for however long the concession lasts" (Sclar, 2010: 13).

The downside of this shift towards segmented public services is that infrastructure is no longer seen as an integrated set of networks that are considered part and parcel of the expanding city. This loss of a network-based perspective (more specifically, the connection between the different elements (collection and disposal) in the waste market characterises one of the principal problems encountered in the procurement of the Poolbeg incinerator.

Conclusions

There is little doubt that PPP presents an attractive procurement model for governments that are grappling with the requirement to improve public infrastructure often in the context of binding fiscal constraints. The burgeoning international literature on PPP however illuminates how the model does not necessarily provide the complete solution to the objectives of governments in this regard and several challenges must be addressed if the full potential of PPP is to be realised.

This paper focuses on one of the challenges faced by those involved in PPP procurement. It is often argued that PPP has the potential to speed up the delivery of infrastructure and

assist in achieving the onerous objectives of delivering projects 'on-time' and 'within budget'. Although there is evidence to support claims that PPP leads to relatively shorter construction times there are challenges around expediting projects through the PPP tendering process which is often characterised by complexity and uncertainty. Ensuring best practice in the tendering process is therefore important as the alternative runs the risk of undermining competition for contracts as potential bidders are likely to be deterred from submitting full bids. Moreover, it is reasonable to assume that inefficient procurement will lead to increases in overall project costs and reduce value for money under PPP.

The history of PPP procurement in the UK suggests that efforts to improve the execution of the tendering process have been on-going since the early days of the PFI. Official reports on the PFI (HM Treasury, 2003; NAO, 2007; HM Treasury, 2012) have, over time, emphasised the objective of strengthening the procurement process. For example, the recent report by HM Treasury (2012:36) which launched PF2 devoted a full chapter to this issue, which outlined the government's commitment to "ensuring PF2 procurement is faster and cheaper than PFI procurement has been in the past, without sacrificing quality and competitiveness". The chapter details a number of reforms designed to improve the procurement process including the establishment of a target of 18 months for the competitive tendering phase of PF2 projects. Where projects take longer than 18 months (between date of contract notice and appointment of a preferred bidder) they will be withdrawn unless an exemption is agreed by the 'Chief Secretary'.

The need to improve the tendering process has also been highlighted in the case of Ireland. The National Development Finance Agency has recently declared that it aims to reduce the procurement schedule to between 15 (for schools) and 18 months. This target covers the period between OJEU notice and financial close/contract award. Given that the target of 18 months set by HM Treasury is based on the appointment of the preferred bidder the Irish target does appear ambitious.

The analysis presented in this paper indicates that tendering periods in Ireland have averaged approximately 33 months to date. Although we also find that tendering periods

are getting shorter over time, significant further improvements are required if a target of 15-18 months is to be met in the short to medium term. The finding that tendering procurements are longer for 'non-private finance' PPPs points to issues with PPP procurement by local authorities. However, our case-study of the *Dublin Waste to Energy* PPP reminds us of the array of factors that can impact on the tendering period, some of which would apply under both PPP and traditional procurement approaches.

Whereas our analysis sheds light on questions such as how tendering periods vary across PPP models and sectors, we do not make comparisons with tendering periods under traditional procurement methods. A comparative analysis along these lines offers a potentially fruitful line of inquiry which can build on the initial contribution presented in this paper.

Table 1: Multi-Annual Capital Investment Framework 2008-2012

	2008	2009	2010	2011	2012	Total
Direct Exchequer Capital Funding (1)	9,054	9,469	9,592	9,676	11,060	**48,851**
PPP Capital Funding (2)	334	893	1,806	2,278	2,407	**7,718**
Within Envelope (1) + (2)	*9,388*	*10,362*	*11,398*	*11,954*	*13,467*	***56,569***
PPP Funded by User Charges	365	450	345	200	200	**1,560**
Total Investment	*9,753*	*10,812*	*11,743*	*12,154*	*13,667*	***58,129***
PPP as % of Total	7.2%	12.4%	18.3%	20.4%	19.1%	**16.0%**

Notes: (1) Data set out in a 5 year rolling capital envelope; (2) Capital investment under PPP is included in the years of construction where PPP investment is 'On Balance Sheet'; (3) Where PPP investment is categorised as 'Off Balance Sheet', capital investment and the costs of servicing the finance, maintenance and operation of these projects are counted as expenditure upon completion of the construction of the projects concerned. PPP investment that is funded by user charges is included separately.

Table 2: Number of PPP projects and stage of project cycle by sector, September 2012

Sector	Procurement	Construction	Operation	*Stimulus Projects*	Total
Roads	0	0	10	*3*	**13**
Courts	0	0	1	*2*	**3**
Education	0	0	5	*3*	**8**
Arts/Tourism	0	0	1	*0*	**1**
Primary Care	0	0	0	*2*	**2**
Garda HQ + Pathology Lab	0	0	0	*1*	**1**
Water	8	1	2	*0*	**11**
Wastewater	16	15	24	*0*	**55**
Total	**24**	**16**	**43**	***11***	**94**

(1) Data is derived from the PPP website housed by the Department of Finance and updated in September 2012. It is supplemented by (a) information provided at the announcement of the government's 'Stimulus Plan' in July 2012 and (b) information for water and wastewater projects provided by the Department of the Environment, Community and Local Government in November 2011 and information for roads projects provided by the National Roads Authority in April 2012.

Table 3: Expenditure and Commitments under PPP Contracts at end 2011

Department/Agency	No. of Projects	Expenditure to Date (€)	Outstanding Commitment (€m)	Total
Education and Skills	5	255	1,078	1,338
Courts Service	1	59	567	627
Office of Public Works	1	95	658	754
National Roads Authority	10	1,285	1,689	2,984
Environment, Heritage and Local Government	20	648	37	705
Total	**37**	**2,342**	**4,029**	**6,408**

Source: Office of Comptroller and Auditor General (2012). Notes: (1) Assumes inflation will average 2% a year over the remaining lives of the contracts; (2) Amounts shown in relation to projects sanctioned by the Department of Environment, Community and Local Government are the contributions by the Department towards the capital cost of the local authority PPP projects. They do not include expenditure under the

contracts by the relevant local authorities, or the outstanding commitments that will have to be met by the local authorities from their own future budgets.

Table 4: PPP projects by sector, PPP type, procuring authority and average tendering period

Sector	No. of Projects	PPP Type	Procuring Authority	Average Procurement Period (Months)
Schools	6	DBFOM	Dept. of Ed/NDFA	30.5
Courts	1	DBFOM	NDFA	24
Convention Centre	1	DBFOM	NDFA	41
Motorway Service	1	Concession	NRA	29
Roads	8	Concession	NRA	32.6
Fixed Links	2	Concession	NRA	46
Housing	4	DBFOM	Local Authorities	22
Water	5	DBO	Local Authorities	33.6
Wastewater	30	DBO	Local Authorities	35.3
Waste	1	DBOFM	Local Authority	58.0
Total	**58**			**34.0**

Source: Authors' own calculations.

Table 5: Variable descriptions

Variable	Type	Description
Non Finance Dummy	Indicator	Non Private Finance/DBO = 1; Private Finance PPP = 0.
Capital Value	Continuous	Amount in millions (€) relating to the value of the project
Time Period 1997-2003	Indicator	1= Project advertised during the period 1997-2003; 0 = Not advertised during the period 1997-2003
Time Period 2003-2006	Indicator	1= Project advertised during the period 2004-2006; 0 = Not advertised during the period 2004-2006
Time Period 2007-	Indicator	1= Project advertised in or post 2007; 0 = Not advertised in or post 2007

Table 6: OLS Regression Results for Tendering Periods of PPP Projects in Ireland

Variable	Coefficient	t
Non Finance Dummy	9.9**	2.42
Capital Value	0.022*	1.95
Time period dummy 1997-2003	8.8**	2.07
Time period dummy 2004-2006	-2.5	0.62
Constant	22.77***	4.90
Observations: 59	**R^2: 0.26**	

Notes: (1) The dependent variable (*months*) is a count variable indicting the number of months from the time a PPP project was advertised to the date the contract was signed; (2) Absolute values of t statistics are presented in parentheses: (3) *** denotes significant at 1%, ** denotes significant at 5%, and * denotes significant at 10%; (4) The base category for the time period dummies is the post-2007 time period.

Table 7: Estimated Marginal Effect of Non-Finance Dummy by Time Period

Time Period	dy/dx	z
1997-2003	13.5*	(2.23)
2004-2006	11.3*	(1.96)
Post 2007	2.6	(0.36)

Notes: (1) The dependent variable (*months*) is a count variable indicating the number of months from the time a PPP project was advertised to the date the contract was signed; (2) Absolute values of z statistics are presented in parentheses; (3) *** denotes significant at 1%, ** denotes significant at 5%, and * denotes significant at 10%.

Table 8: Estimated Marginal Effect of Capital Value by Time Period

Time Period	dy/dx	z
1997-2003	0.03**	(2.31)
2004-2006	0.01	(0.66)
Post 2007	0.1**	(2.19)

Notes: (1) The dependent variable (*months*) is a count variable indicating the number of months from the time a PPP project was advertised to the date the contract was signed; (2) Absolute values of z statistics are presented in parentheses; (3) *** denotes significant at 1%, ** denotes significant at 5%, and * denotes significant at 10%.

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Appendix

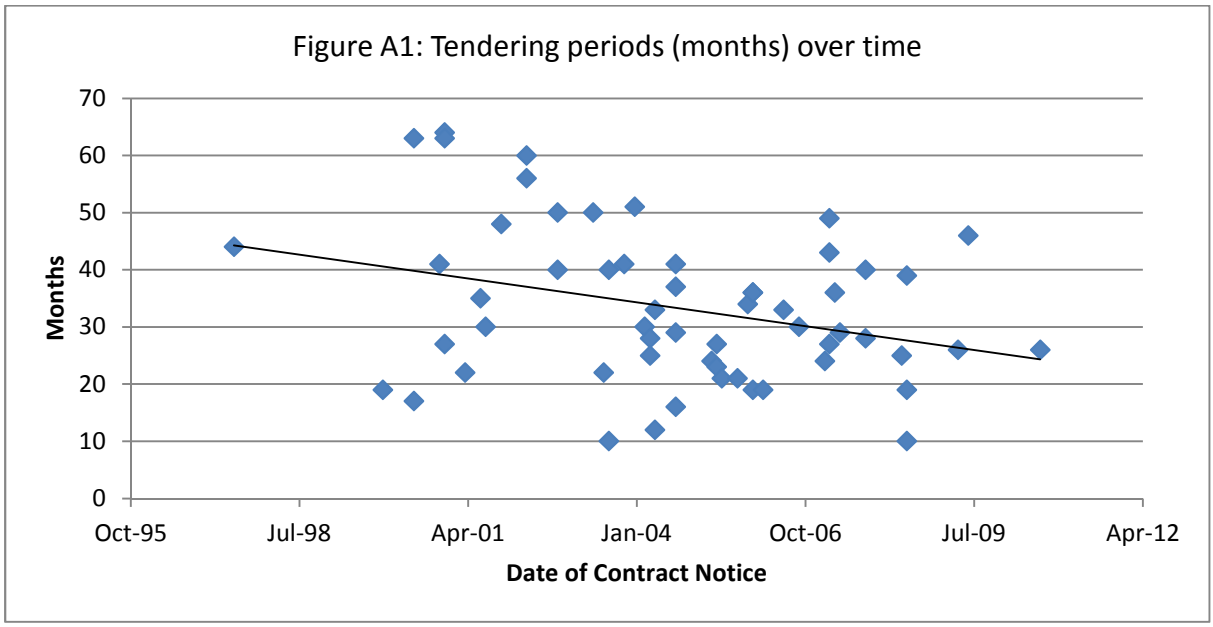
Figure A1: Tendering periods (months) over time
70
60
50
40
30
20
10
0
Months
Oct-95
Jul-98
Apr-01
Jan-04
Oct-06
Jul-09
Apr-12
Date of Contract Notice

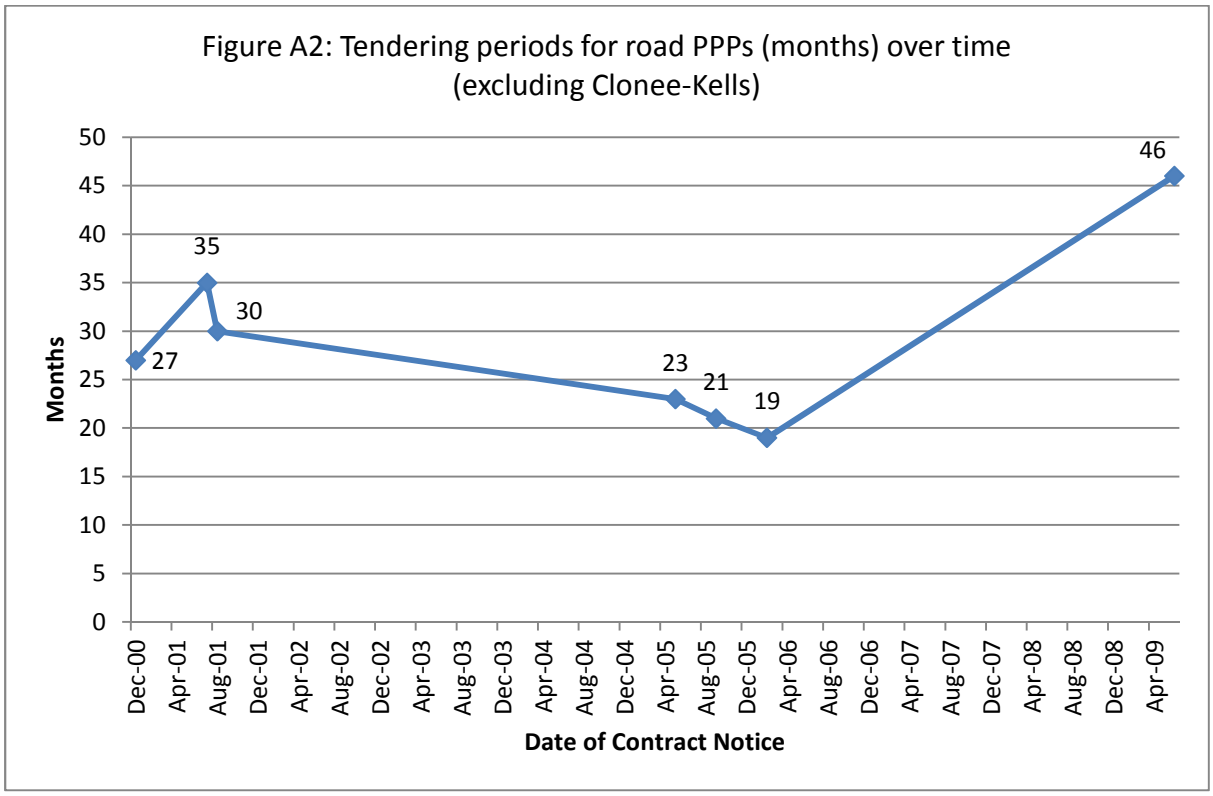
Figure A2: Tendering periods for road PPPs (months) over time
(excluding Clonee-Kells)
50
45
40
35
30
25
20
15
10
5
0
Months
27
35
30
23
21
19
46
Dec-00
Apr-01
Aug-01
Dec-01
Apr-02
Aug-02
Dec-02
Apr-03
Aug-03
Dec-03
Apr-04
Aug-04
Dec-04
Apr-05
Aug-05
Dec-05
Apr-06
Aug-06
Dec-06
Apr-07
Aug-07
Dec-07
Apr-08
Aug-08
Dec-08
Apr-09
Date of Contract Notice

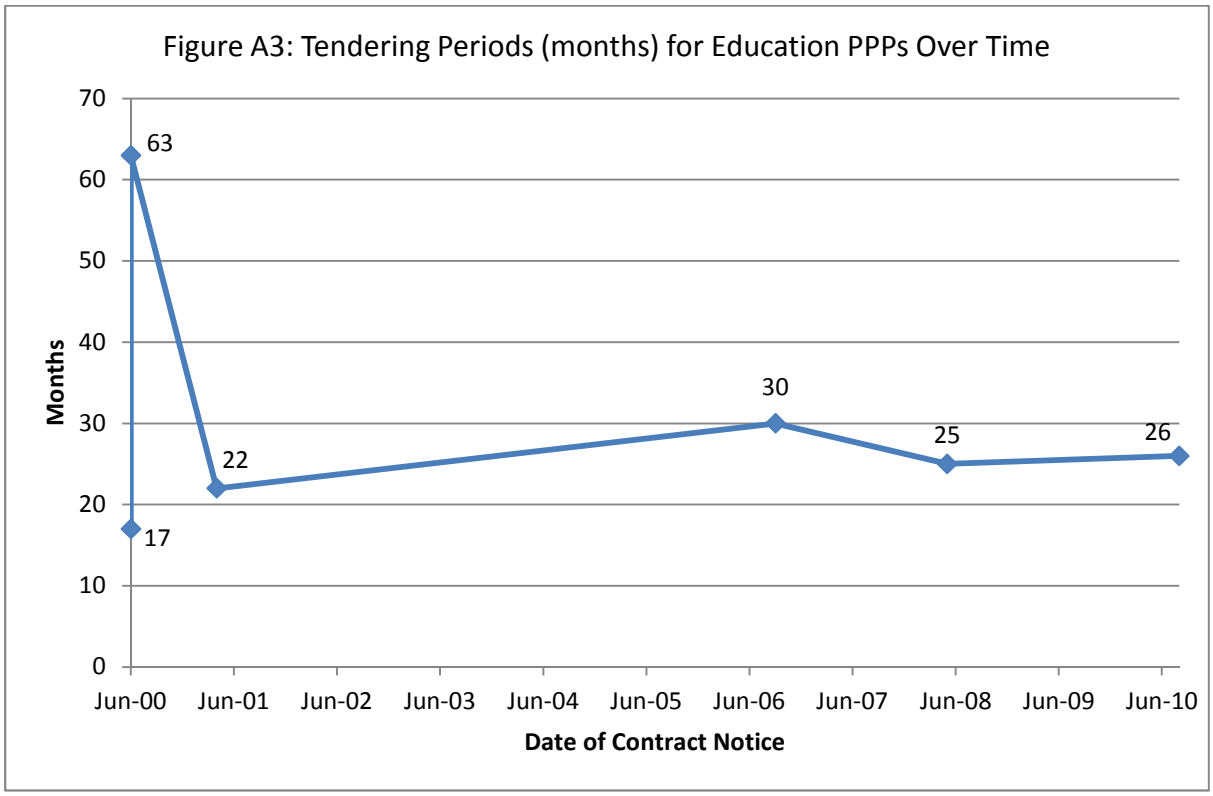
Figure A3: Tendering Periods (months) for Education PPPs Over Time
70
60
50
40
30
20
10
0
Months
63
22
17
30
25
26
Jun-00
Jun-01
Jun-02
Jun-03
Jun-04
Jun-05
Jun-06
Jun-07
Jun-08
Jun-09
Jun-10
Date of Contract Notice

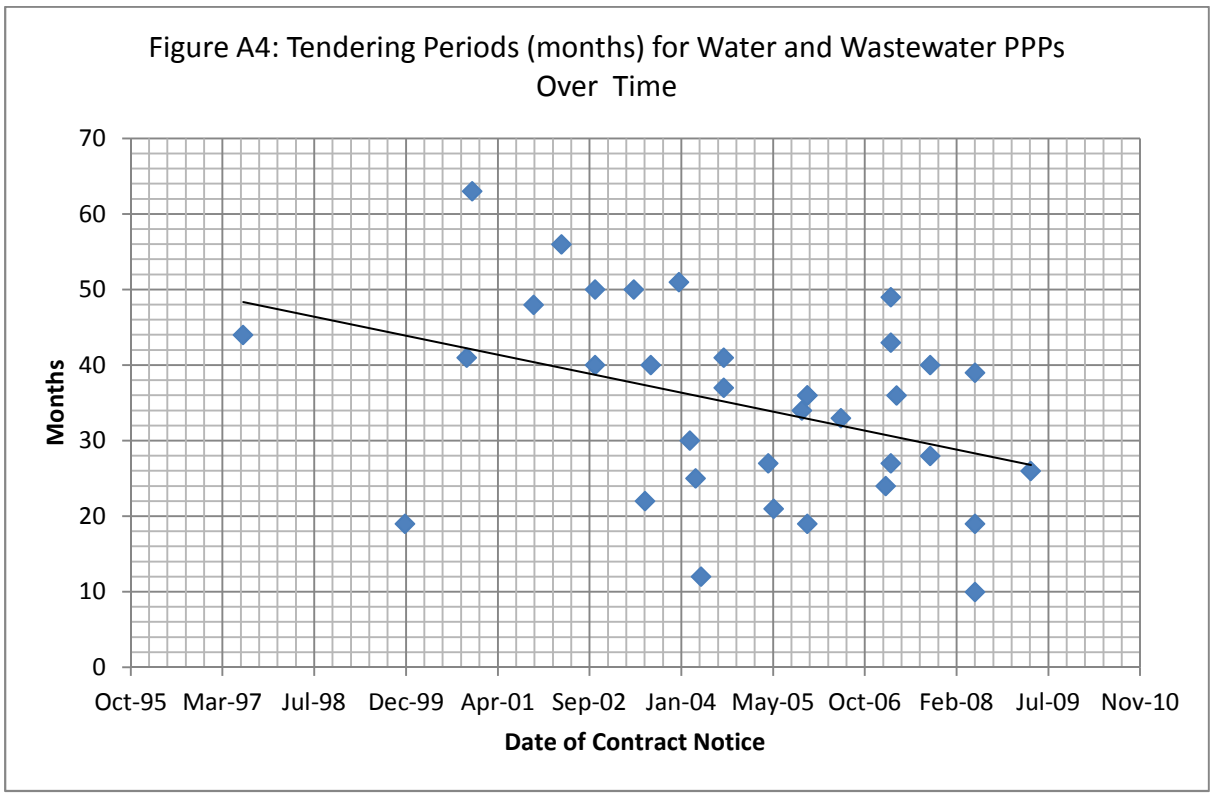
Figure A4: Tendering Periods (months) for Water and Wastewater PPPs Over Time
70
60
50
40
30
20
10
0
Months
Oct-95
Mar-97
Jul-98
Dec-99
Apr-01
Sep-02
Jan-04
May-05
Oct-06
Feb-08
Jul-09
Nov-10
Date of Contract Notice

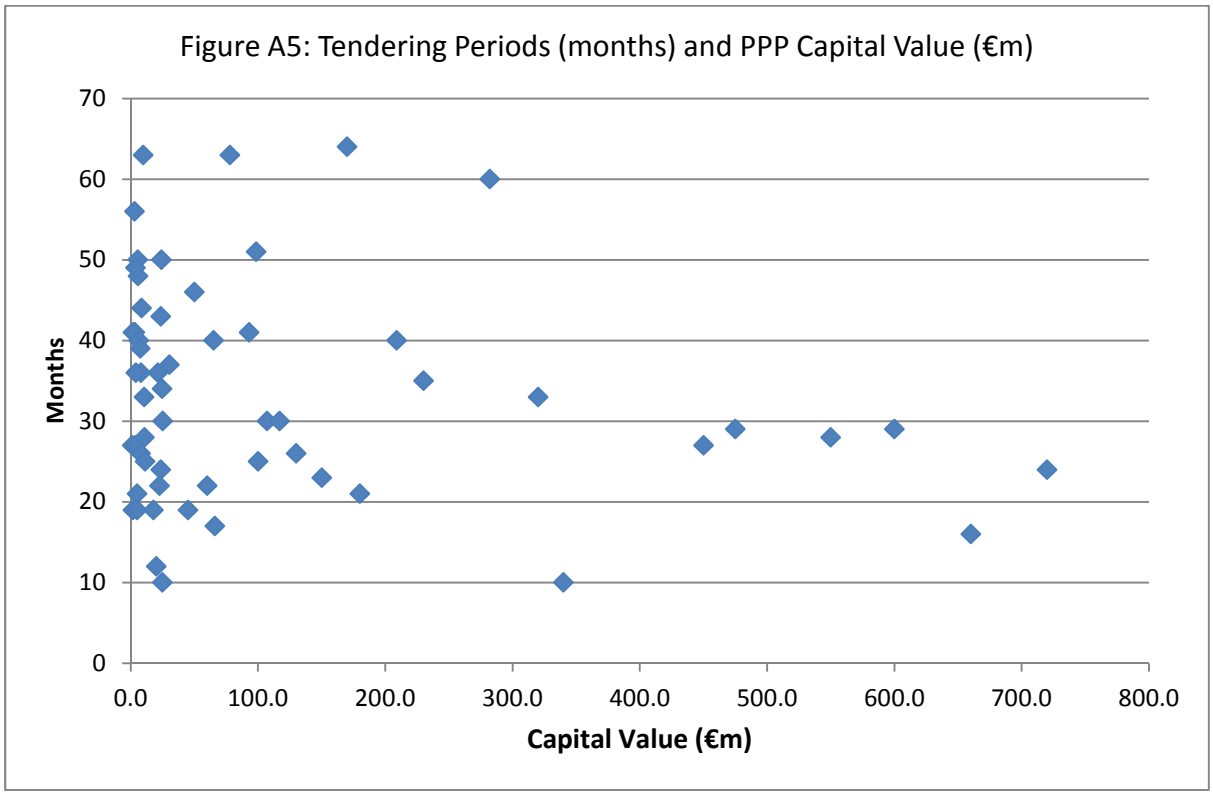
Figure A5: Tendering Periods (months) and PPP Capital Value (€m)
Months
70
60
50
40
30
20
10
0
0.0
100.0
200.0
300.0
400.0
500.0
600.0
700.0
800.0
Capital Value (€m)