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Abstract

Increasingly governments are looking to private sector actors to invest in infrastructure projects. An emergent mechanism for such investment is the market in PPP equity. This is an aspect of PPPs that has to date had little empirical attention. This paper reports on the size and scope of the market in PPP equity sales within the UK. In the process, the nature of PPP projects and the existing rationales for the policy are critiqued. The paper concludes by laying out a number of potential research agendas focused on PPP equity sales including a call for reassessing theoretical perspectives.

Keywords

Public Private Partnership (PPP); secondary market; equity sales; infrastructure investment funds.

1. Introduction

The Westminster government recognises that infrastructure investment is essential for ensuring growth and development opportunities are distributed across the countries that comprise the United Kingdom (HM Treasury, 2014). In July 2015, the Conservative government revised and published a *National Infrastructure Pipeline,* stating it was underpinned by £411 billion of investment (HM Treasury, 2015). It is expected that the majority (up to sixty four percent) of this funding will come from private sources (HM Treasury, 2015) This approach results in government policy on infrastructure investment needing to be attractive to the private sector (Panayiotou and Medda, 2014; Hellowell et al., 2015).

The main vehicle for this private sector investment remains the Private Finance Initiative (PFI). The introduction of the PFI in the early 1990s was based on a series of justifications including the lack of available public capital funding due to political decisions, enhancing value for money, an ideological commitment to introducing private sector management techniques to the public sector and appropriate risk allocation for major construction projects (Broadbent and Laughlin, 1999; Wall and Connolly, 2009).

These justifications have been critiqued during the intervening period, raising significant doubts over each one (see Andon, 2012; Pollock, 2004). However, Public Private Partnerships (PPPs)[1], as PFI has become known, is a dynamic policy where new and unexpected practices have developed. This paper explores one of these developing practices, the emergence of a market in PPP equity sales. This market is

[1] In the main, the rest of this paper uses the acronym PPP to describe all three generations of the policy (PFI/PPP/PF2), as it is the most comprehensive and encompassing term of the three available. Private Finance 2 (PF2) is the name given to the rebranded (but fundamentally the same) policy under the UK Coalition government (2010-2015).

portrayed as a positive development for attracting more private sector investors (NAO, 2012; Weber et al. 2016). In analyzing this development this paper addresses the call for more research into the underlying nature (Broadbent and Laughlin, 1999; 2004) and rationales (Andon, 2012; Spackman, 2002) of PPPs.

We understand infrastructure PPPs '…as the preference for private finance, complex bundled contracts through a consortium and new accountability and governance assumptions …' (Hodge et al., 2018: 2). Such PPPs are constructed with their own Special Purpose Company (SPC)[2] to undertake the design, construction, finance and operation of a public asset (such as a school or hospital). In the UK, the initial (primary) equity holders[3] of the SPC are usually the construction company, bank (or financial institution) and the facilities management contractor. The SPC contracts with the public organization and finances construction predominantly through (senior) debt that accounts for 85 per cent to 90 per cent of the required finance. The remaining finance is provided by the equity shareholders in the SPC. It is this equity that is the focus of the analysis below, as it has given rise to the development of a secondary market (NAO, 2012).

This is a new, emergent market with little work reported to date in academic journals. Therefore, this paper seeks to make an initial empirical contribution by focussing on equity sales in UK PPP projects between 1998 and 2016. This empirical contribution, as it is based on data drawn from disclosures and announcements by international private sector partners, addresses part of Hodge and Greve's (2018) contemporary

[2] The term Special Purpose Vehicle (SPV) is often used in the academic and policy literature; however it is not appropriate for the purposes of this paper as the concern is on equity sales from SPCs. Further, the use of SPV can obfuscate the real nature of the relations involved with a PPP.
[3] "Equity holders" is the appropriate term to use as the transactions reported in this paper are composed of both shares and sub-ordinate debt. However, when the transactions are reported the vendors do not disclose the breakdown between the shares and the debt.

research agenda focus on global PPP market actors. Further, the paper seeks to make a theoretical contribution by adding to the debate about the nature of PPP projects and the rationales used to justify the policy. We pay particular attention to those advanced by Spackman (2002) concerning the benefits of monitoring, long term commitment and "whole life" costing. This theoretical contribution addresses part of Hodge and Greve's (2018) contemporary research agenda focus on long-term complex contracts as governing regimes.

The focus on equity transactions is justified because the development of this secondary market embeds the processes of financialization (and marketization) in public infrastructure assets (O'Neill, 2013). This has implications for ownership transparency, democratic accountability and value for money for the taxpayer (Smyth and Whitfield, 2017). There are also implications for the performance of PPP projects, as the design of appropriate performance measurement systems requires a clear understanding of the nature of the subject being measured. For example, is it appropriate to expect whole life costing or long term commitment from private sectors partners if they are potentially going to exit the project before six years, of a thirty year project, have elapsed (see section 4.1 below).

There are (as yet unknown) potential impacts on service delivery as some PPP projects become majority or wholly owned by investment funds. Working from a neoclassical economics perspective, Weber et al. (2016: 306) note that the structure of PPPs must offer equity investors 'a sufficiently attractive risk-return profile and in terms of governance, *the opportunity to intervene in the project at an operational level*' (emphasis added). Further, Gatti states: 'if a key party sells it shares in the SPV's

capital to third parties then there is less incentive for the project to be performing' (2018: 267).

The growth of (offshore) infrastructure funds also raises questions concerning tax avoidance and secrecy. This creates the conditions where excessive profit-making may occur and is difficult, if not impossible, to identify. All of these factors require future research and raise questions about how we have understood the nature – merit and worth to use Broadbent and Laughlin's (1999) formulation – of PPPs and whether existing theorizations are appropriate (Andon, 2012; Hodge and Greve, 2008; Linder, 1999).

This paper does not seek to address all of these issues focusing on the empirical and theoretical contributions stated earlier; however, these issues do provide the justification for a prolonged research engagement with PPP equity sales. The remainder of this paper is structured as follows: the next section locates equity sales within the broader PPP literature and identifies a burgeoning concern over the level of profit-making on these transactions. Section three explains the research design, while section four sets out the data on the PPP equity market. Section five returns to Spackman's (2002) work and discusses it in the context of the data from the previous section. Finally, in section 6, the paper concludes with a reflection on the nature of PPPs given this emergent market and outlines possible future research projects.

2. What do we know about PPP equity sales?

The emergence of PPP equity transactions appears to have been unanticipated by researchers. The general PPP research themes identified by Broadbent and Laughlin (1999, 2004) contain concerns on regulation, processes aiding decisions to undertake PPPs, and *ex post* evaluations (Andon, 2012); all of which are applicable to this

secondary market even if equity sales are not specifically mentioned. Whitfield (2010) first outlined the scale of PPP equity sales transactions; raising concerns about the role of participants (including the many offshore infrastructure investment funds) in the market, and apparent levels of profiteering.

While this paper reports the size and scope of the emergent PPP equity market in the UK, we also seek to understand its significance through the lens of our existing understandings of the nature (Boardman and Vining, 2012; Broadbent and Laughlin, 1999; 2004) and rationales (Andon, 2012; Glaister, 1999; Spackman, 2002) for PPPs. Existing literature has sought to understand the manner in which PPP policy has evolved using various lenses, including PPP as management reforms, as problem conversion, as moral regeneration, as risk shifting, as restructuring public services, and as power sharing (Linder, 1999: Andon, 2012). More specifically, Spackman (2002: 288-290) critiques the following five perceived financial benefits of using PPPs for governments:

a. Easing macroeconomic constraints;
b. Bypassing controls on public service investment;
c. Evading formal constraints on borrowing or spending;
d. Semi-privatisation of self-financing projects;
e. Capital rationing as an instrument for change.

Spackman (2002) finds these arguments unsatisfactory for a number of macro-economic reasons, such as 'liabilities to service PFI contracts are as binding as the servicing of conventional government debt' (p. 289); and, 'private financing provides no extra resources at the national level' (p. 290). Spackman is not on his own in this regard. Writing in this journal Boardman and Vining (2012: 119) state:

> most of the criteria explicitly or implicitly used by governments to justify the use of PPPs – such as deferring expenditures, placing expenditures 'off-budget', 'value for money' and 'on time and on budget' – are either inadequate or just plain wrong.

This leads Spackman (2002) to advance three alternative rationales for using private finance and partners in public infrastructure projects:

> First, monitoring requirements are likely to be more robust ... Second, contractors are tied to a longer-term capital investment ... Third, PPPs focus planning on "whole life" costing...
>
> (Andon, 2012: 881- 882).

In contrast, we contend that the manner in which the market in PPP equity transactions has emerged calls into question each of these three rationales.

First, Spackman (2002) has a narrow view that contractor monitoring will be improved as 'private financiers may be stronger than those from the public sector clients under conventional contracts' (Spackman, 2002: 290). Spackman does note that there is little empirical evidence capturing financiers' views on this; this remains the case nearly two decades later (Hodge and Greve, 2018), with Demirag et al. (2015) one notable exception. If we broaden the monitoring perspective to include *ex post* evaluations, there still remains little evidence available (Andon, 2012; Hodge and Greve, 2018). We would have to extend our interpretation of monitoring even further, and positing monitoring as a necessary element of regulation, before we get to a significant body of work that focuses on legislation, accounting policy, accountability and contracting arrangements (Andon, 2012).

However, the studies Andon (2012) reviews do not address the emergent PPP equity market; while, Whitfield (2012) notes that there is a lack of regulation and oversight in the market. For example, the government auditor in England – the National Audit

Office (NAO) – has stated that most of what occurs in the secondary market is beyond their remit as it involves transactions between two private companies, even where the sole source of income for the SPC comes from public funds (NAO, 2012).

Second, the emerging PPP equity market highlights, contra Spackman (2002), the lack of long-term commitment by primary investors. The market has developed to allow primary investors an exit route at an early stage (House of Lords, 2010). This is seen as a positive development that allows primary investors recycle their capital investments and make them available for future projects (NAO, 2012; Weber et al., 2016). Further, an NAO report concluded that the development of the PPP equity market could lead to a reduction in the cost of equity in SPCs (NAO, 2012).

Whether such capital recycling takes place is an open question; however, what is already known is that the primary investors are booking profits as well as liquidating their investments. For example the earliest identified PPP equity transaction, in the UK, took place in June 1998 when Serco sold their thirty three per cent holding in the Defence Helicopter Flying School PFI[4] to FR Aviation Ltd and Bristow Helicopter Group (ESSU, 2016). In their financial statements for 1998 Serco reported a £4.6 million profit on this disposal. A HM Treasury report on the operation of PPP projects admitted there have been windfall gains made on equity sales (HM Treasury, 2012).

To clarify, these gains on equity sales are different to the practice of refinancing gains on debt finance that is already established in the literature (Demirag et al., 2015; HM Treasury, 2006, 2007; Toms et al., 2011). 'Refinancing is considered particularly

[4] 'The Group's 33% equity holding in FBS Limited, was sold on 12 June 1998 for a cash consideration of £3,440,000, with associated disposal costs of £90,000. The Group's share of the net liabilities of FBS Limited at the date of disposal was £1,252,000 generating a profit on sale of £4,602,000.' (Serco, 1998: 39).

suitable for projects where the construction phase has been completed and the operational phase is demonstrably successful, which significantly reduces the risk profile of such projects and allows for revenues to be forecast more accurately' (Toms et al., 2011: 672). During the first two decades of the PPP policy gains from such refinancing were often excessive; for example, the *Norfolk and Norwich Hospital* PPP saw its investor rate of return nearly quadruple from 16.0 per cent to 60.0 per cent after refinancing took place two years into a thirty-year contract (HM Treasury, 2007; Toms et al. 2011).

There are three points arising from the debt refinancing literature that are relevant to this paper's focus on equity transactions; first, HM Treasury initially indicated support for refinancing gains accruing to the private sector partners on the basis that this will encourage greater private sector involvement in PPPs. This is the same argument that has been deployed by the government auditors (the NAO) in support of the development of the market in PPP equity transactions (see above).

Second, there is a direct link between the weak regulation of the debt refinancing gains (Demirag et al., 2015; Toms et al. 2011) and the emergent equity transactions. The House of Commons' Public Accounts Committee has indicated that investors are 'opting to defer refinancing in favour of realising gains through selling their shares in the secondary equity markets' (PAC, 2007: 5). Third, in assessing what the debt refinancing gains tell us about the nature and rationale of PPP projects, Toms et al. state: 'many PFI refinancing deals appear to have been little more than a vehicle for a direct transfer of money from the public purse to the private investors, leading some politicians to refer to refinancing as the unacceptable face of capitalism' (2011, 672). This point is relevant to our discussion below, where we posit that future research on

equity transactions, and PPPs more broadly, needs to adopt a political economy framing to establish the links between the PPP policy, (excessive) profit-making for private sector partners and the changes in the global economy and the form of capital accumulation over the past four decades (Arnold, 2009; Froud et al. 2000; Harvey, 2005).

As to Spackman's (2002) third additional rationale, concerns about the benefits of whole life costing have already been identified in the extant literature; for example, 'there is a danger of long-term PPP contracts tying an organization into a specific type of technology … reducing flexibility and the introduction of newer technologies' (McQuaid and Scherrer, 2010: 32). The liquidating and profit-taking process outlined in section 4 also brings into question the nature and benefits of whole life costing. Viewing PPP projects over their whole life, there are now two mechanisms through which private sector partners can extract additional (windfall) gains; via debt refinancing (as outlined above), and via the disposal of equity shares (as outlined later in this paper). While neither of these mechanisms may have been foreseen when the PPP policy was first formulated, they are now obvious to private sector contractors, changing their attitudes towards costs and revenues streams. Thus, primary investors become more concerned with a shortened horizon to the point where they can dispose of their equity and make a profit on it, rather than a long-term commitment.

This section has discussed the research that analyses the nature of PPPs, from the perspective of equity transactions; noting that this is a new emergent market that challenges key rationales used to justify the policy. The next section explains the methodology adopted to gather the data reported on later; before presenting the data,

after which the discussion returns to Spackman's (2002) three alternative rationales for PPP policy, in light of the findings.

3. Research design

In the main, this research is based on a publicly available database[5] that records PPP equity transactions reported by construction companies, banks and financial institutions, infrastructure funds and facilities management companies. The database was constructed by one of the co-authors from reports of actual sales/transfers of PPP equity. However, there were two significant obstacles in collecting this data. First is the fragmented nature of the announcements and disclosures. While, equity holders are supposed to give thirty days notice to their public sector partner of their intention to dispose of their shares, this does not have to be made public. Further, there is no oversight body responsible for enforcing disclosure or for recording these transactions. Hence, the data below was collected from a range of sources that include:

- Stock exchange announcements/regulatory news service, company notices and press releases;
- Company interim and annual reports and accounts;
- UK Companies Houses filings (and in Jersey and Guernsey);
- Infrastructure investment fund prospectuses;
- Construction and PPP company websites;
- Former Partnerships UK Database;
- HM Treasury PFI database;
- Securities and Exchange Commission 8K filings for US companies;

[5] The database is available free online at: https://www.european-services-strategy.org.uk/ppp-database/ppp-equity-database
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- PPP, financial, construction and infrastructure trade journals.

(based on Whitfield, 2012: 24).

The second obstacle concerned a lack of transparency with regard to the contents of such announcements/disclosures. There is no prescribed format or information that should be disclosed. Therefore, often basic information such as cost, gains/losses made, and even price paid are omitted. This means that while every effort was made to prepare a comprehensive and accurate database, it is possible that inconsistencies are present and it is probable that many equity transactions have yet to be identified. It should be noted that similar difficulties, especially with regard to a lack of transparency, have been found by other researchers working on PPPs (e.g. Shaoul, 2006).

The database covers UK PPP equity sales from 1998 to the end of 2016. It contains 462 transactions covering 1,003 PPP projects, with 118 transactions covering 334 PPP projects disclosing gains/losses made. Drawing on the database entries, the ESSU (2016) estimates that 45 per cent of PPP projects (334) are between 50-100 per cent owned by offshore infrastructure investment funds**.**

On the accounting profits disclosed below, equity transactions may not be disclosed for up to a year after the transaction took place, when company annual reports are published. Further, it may not be possible to attribute the gain/loss to individual PPP projects when they are sold in a bundle, or where the transactions are not considered material in the context of a consolidated set of financial statements. Finally, the database does not record internal transfers, for example, between subsidiaries with the same group of companies.

The tables in the following section have been constructed from the data contained in the ESSU (2016) database (there was no sampling of this population). There are also two examples, to illustrate the impact of equity transactions on individual public infrastructure assets. These projects were chosen, not because they are currently typical, but because they illustrate the potential and likely future trends based on current government policy of encouraging investment in PPPs from institutional investors.

4. Results and trends in PPP equity transactions

We present the results of our analysis over three sub-sections – the overall size and scope of the market, the growth of infrastructure funds and the gains reported when the equity transactions take place – to give an overview of the emergent market and how it relates to the rationales discussed previously.

4.1 Overall size and scope of the PPP equity market

From 1998 to the economic crash in 2008 there was a steady increase in the number of equity transactions, the number of PPP projects covered by those transactions and the total annual value of the transactions. The economic crisis of 2007/8 had a short-lived impact on each of these trends, with activity from 2011 starting to approach the pre-crash levels. Although it is too early to be definitive, the years 2015 and 2016 appear to indicate a new trend where the actual number of transactions is decreasing but the value of equity being traded is increasing. This potentially reflects a concentration of shareholdings among a small number of market participants, due to the emergence of infrastructure investment funds (see 4.2 below).

In reading Table 1 it is relevant to remember the lack of regulation of disclosures on equity transactions and the nature of the transactions themselves. First, with regard

to the number of equity transactions reported in columns 2 and 4, the difference is due to a lack of disclosure of the transaction value even though the transaction itself was disclosed. An example of this is the BBGI SICAV S.A. (Luxembourg) acquisition of 12.5 per cent of the equity in Mersey Care Mental Health Hospital PPP project, on 24 July 2014. The Regulatory News Service (RNS) statement omitted to report the cost of the transaction from GB Partnerships Investments Limited which is not a public company and was therefore not required to issue a RNS (BBGI, 2014).

Second, when transactions take place they often involve bundling equity from a number of PPP projects together in the one transaction; hence, the 462 transactions have involved over a thousand projects (some projects having part of their equity sold and re-sold several times). An example of this is the Balfour Beatty plc sale of its 80 per cent interest in five street lighting PFI projects to Equitix Limited (Tetragon Financial Group, Guernsey) for £33m (Balfour Beatty, 2016). The RNS did not name the five local authorities concerned.

Using the numbers in Table 1 it is possible to estimate the value of the total equity traded in this market, from the 279 transactions where the price was disclosed. The monetary total of these 279 transactions was £6,411.3 million; giving a simple average of £22.9 million per equity transactions. Therefore, with a total population of 462 transactions between 1998 and 2016, an estimate of the total value of this market is £10.6 billion.

Table 1: **Annual rate and value of UK PPP equity transactions** (1998-2016)

Year	No. of equity transactions	No. of PPP projects (includes those where equity was sold more once)	Value of equity sold (£m) (No. of transactions)
2016	16	38	649.5 (16)
2015	22	26	353.0 (13)
2014	45	70	635.8 (19)
2013	47	74	390.0 (30)
2012	52	116	853.7 (38)
2011	38	112	389.6 (32)
2010	23	82	614.0 (19)
2009	29	66	377.4 (22)
2008	14	40	136.3 (8)
2007	22	66	414.8 (15)
2006	35	113	807.7 (23)
2005	42	55	389.6 (19)
2004	32	75	143.7 (12)
2003	17	31	134.6 (8)
2002	4	4	n/a
2001	15	26	117.4 (4)
2000	7	7	n/a
1999	1	1	n/a
1998	1	1	4.6 (1)
Total	**462**	**1,003**	**6,411.3 (279)**

Source: European Services Strategy Unit PPP Equity Database (2016), Whitfield (2017); n/a means "not available".

A sectoral analysis (see Table 2) shows that shares in health and education projects are the most traded, accounting for over sixty percent of the transactions. By comparing this to the PPP project population as a whole, where health and education projects account for just over 50 per cent, we can see that PPP projects in these sector are more popular relatively for trading equity. This may be an expression of the lower demand risk involved with projects in these sectors, than in some other sectors.

Table 2: **PPP equity sales by sector** (1998-2016)

Sector	Number of PPP projects in equity transactions (includes those where equity sold more once)	Percentage of equity transactions	Total number of projects per sector (as at 31/1216)	Percentage of total projects
Education	353	34.9	218	30.5
Health	277	27.8	150	21.0
Transport	104	10.4	68	9.5
Criminal Justice	85	8.4	21	2.9
Housing	30	3.0	35	4.9
Defence	25	2.5	21	2.9
Waste/Water	20	2.0	39	5.4
Other	109	11.0	163	22.8
Total	**1,003**	**100.0**	**715**	**100.0**

Source: adapted from European Services Strategy Unit PPP Equity Database (2016); Whitfield (2017).

We can also report on the time lapse between financial close of the project and the first equity transactions being made. The NAO (2012), while studying a sample of ninety nine PPP projects, found that the gap had reduced from an average of 6.72 years in 2003-2007 to 5.89 years in the 2010-2011. Over the whole period under considerations (from 2003 to 2011) the NAO reported an average time gap of 6.44 years. Using the data collected by the ESSU, which extends up to 2016, the average time gap was 6.47 years (Whitfield, 2017: 17). While a periodization of the ESSU time gap does not indicate a clear trend, the NAO (2012) numbers indicate that primary investors are seeking to exit projects sooner and are, therefore, finding willing purchasers as the market develops and matures.

4.2 Growth of Infrastructure Funds

It is not just the growth of transactions but also the types of organizations buying the equity that is relevant. Table 3 shows the number of equity transactions and PPP

projects involved by purchaser. While there is some trading of PPP equity among the primary investors (e.g. construction firms and banks), a significant tranche of public assets is now partly or wholly owned by infrastructure investment funds. These funds sole objective is a return on their investment for their members; in most cases, the source of this return is the future payments from the contracting public organizations (i.e. the public purse) rather than user charges (such as tolls).

While some of these infrastructure funds are listed on stock exchanges, resulting in the necessity to comply with relevant regulations, therefore giving a certain level of transparency, there are examples of funds de-listing and/or moving to offshore tax havens or being set-up in those havens initially. For example, HICL Infrastructure, John Laing Infrastructure Fund and International Public Partnerships (formerly Babcock and Brown Public Partnerships) are all registered in the UK Crown Dependency of Guernsey, which is widely recognised as a tax haven (Boffey, 2017). This not only raises questions about tax avoidance but also makes it more difficult to assess the impact of decisions made by the funds, thus hampering assessments about performance of PPP projects.

Table 3: **Purchasers of PPP equity**

Type of purchaser	No. of transactions	No. of PPP projects
Other infrastructure fund	179	343
Offshore infrastructure fund	145	318
Pension fund	19	71
Joint venture – construction company & bank or pension fund	12	69
Other financial institution	12	17
Construction or PPP company	57	109
Total	**424**	**927**

Source: European Services Strategy Unit PPP Equity Database (2016); Whitfield (2017).

Further analysis shows that infrastructure investment funds have only been active in this secondary market since 2006, becoming the dominant purchaser of equity since 2010 (Whitfield, 2012: 29), with all of the equity transactions in 2016 being purchases by off-shore infrastructure funds (Whitfield, 2017: 5).

Despite the difficulties in collating comprehensive data on specific PPP projects, it is possible to illustrate some of the ways in which the ownership of public assets are being traded. Our first example (Table 4) shows how the equity in Calderdale Royal Hospital PFI has changed the ownership through both equity sales and firm takeovers, since financial close on 31 July 1998.

Table 4: **Equity trading in Calderdale Royal Hospital PFI – *about here***

A second example – Barnet General Hospital (Table 5) – shows how an offshore infrastructure fund can gain sole ownership of an SPC. Over a three year period, Barnet General Hospital became fully owned by HICL infrastructure fund. HICL had acquired the total equity in four transactions at a total cost of £12.3m.

The Barnet General Hospital PPP, renamed Metier Healthcare, recorded £10.6m pre-tax profit in the thirteen years to 2012; on which it paid £1.3m in taxes. The company had a net debt of £26.5m at 31 March 2012 after taking account of £10.5m cash in the bank. From 2009 to 2012, Metier Healthcare paid dividends of £3.0m, in the main to HICL (Whitfield, 2012: 31).

Table 5: **Equity trading in Barnet General Hospital PFI – about here**

4.3 Reported gains on equity transactions

Following the Metier Healthcare example, Table 6 summarizes 118 transactions affecting 334 PPP projects where both the sale price and accounting gain made was disclosed.

Table 6: **PPP equity transactions with profits data available 1998-2016**

Year	Transactions	No. of PPP projects	Transaction sale price (£m)	Accounting gain reported (£m)
2016	5	16	260.1	**126.2**
2015	6	10	172.9	**118.1**
2014	5	7	164.4	**94.9**
2013	15	21	209.8	**120.9**
2012	8	45	289.8	**158.4**
2011	12	29	187.2	**96.8**
2010	9	31	388.6	**191.5**
2009	10	41	306.0	**50.4**
2008	3	8	83.1	**46.3**
2007	7	33	177.6	**102.7**
2006	11	36	200.8	**77.3**
2005	11	14	263.3	**108.5**
2004	6	16	66.8	**26.3**
2003	8	20	134.6	**87.3**
2002	0	0	0	**0**
2001	1	6	92.5	**58.5**
2000	0	0	0	**0**
1999	0	0	0	**0**
1998	1	1	3.4	**4.6**
Total	**118**	**334**	**3,000.9**	**1,468.7**

Source: European Services Strategy Unit PPP Equity Database 2016; Whitfield (2017).

There is some debate about how much and whether these gains represent profiteering or are acceptable rates of return for the private sector partners (HM Treasury, 2007; NAO, 2012). This paper does not directly address those issues but seeks to raise questions about the robustness of the monitoring of PPP projects, when the NAO has an apparently ambivalent attitude to this matter in the context of the data in the above table and an example quoted in Whitfield (2012: 36):

> **John Laing engineered the fastest profit** - £6.3m in four months, net of costs. It acquired the remaining 50% stake in the M40 road project from Carillion in June 2004 for £19.7m and in October that year sold a 50% stake to the Secondary Market Infrastructure Fund for £26.3m (John Laing, annual report 2005).

These claims of profiteering by SPC partners and others through the sale of PPP equity, is a topic that needs future research. However, it is important to recall why the

claims of excessive profit making are relevant. Excessive profit making would be an indicator that '... the public sector may often be paying more than is necessary for using equity investment (NAO, 2012: 6). In an age of perpetual austerity this represents public money leaking out (Shaoul, 2006) to private shareholders which could instead be redirected towards supporting front line services. In turn such leakages are an indicator that the actual performance of the PPP differs significantly from that planned at commencement of the project. If excessive profit-making is taking place this can only occur from either increased income streams or decreased costs, both of which have negative impacts on the project's performance for service users and those working in service delivery.

With this data in mind the next section revisits the rationales advanced to justify the PPP policy and expounds possible research projects based on the secondary equity market.

5. Discussion

This paper has outlined the size and scope of the burgeoning secondary market in PPP equity transactions. The data concerns UK-based projects as this is the largest and most mature of the PPP markets (Hellowell, 2013). This paper has addressed a previously unexplored area of PPP policy and operation, that of equity transactions. In the process, it has presented evidence that raises serious concerns about the rationales advanced to justify the use of PPPs; casting further doubt on our ability to measure or assess performance of such projects in the first place. The discussion below revisits Spackman's (2002) three additional rationales for public bodies to engage with private finance and private actors in public infrastructure projects. There

is then a brief outline of potential research topics that become evident from the emergence of this market.

Taking Spackman's (2002) additional rationales in turn; first, the emergent PPP equity market has not, so far, allowed for greater (or better) monitoring or regulation. In fact, key regulatory bodies appear to have an ambivalent attitude towards it. This need not necessarily be the case, as the fact that such equity transactions are taking place means that, with relatively little effort, key information (such as price paid, size of stake disposed and related costs/profits) could be disclosed by sellers and purchasers. Crucially, this information needs to be collated and made publicly available, to ensure that appropriate monitoring and performance measurement mechanisms can be applied in pursuit of public accountability. However, it is relevant to note that the previous attempts to regulate – by sharing with public sector bodies – the gains made through refinancing debt, were poorly designed and implemented (Demirag et al. 2015; Toms et al., 2011). Therefore, a step change in government's attitude towards this form of regulation is needed to control the PPP equity market.

Second, the long-term commitment rationale for using private sector finance and partners does not stand up to the existence of the PPP equity market or the actual behaviour of primary investors. The market has developed to allow primary investors exit projects early. The theoretical justification for this is to allow the recycling of capital (NAO, 2012; Weber et al., 2016). However, we have no evidence to illustrate whether this is actually occurring. The NAO (2012) has shown that there is on average just six and a half years between financial close and equity sales. We also showed that primary investors are booking (often) considerable profits on disposal of their equity holdings. This acts as an incentive for companies to exit projects in an attempt to maintain earnings levels and share prices. While this motivation is consistent with the

work that has emerged on the financialisation of the firm (Froud et al., 2000), empirical studies are needed to establish the reasons behind these equity disposals by the primary investors and the extent to which ideas around financialization influence this activity (Hodge and Greve, 2018). However, it is clear from the evidence above that many primary private sector investors are not committed to a long-term relationship with public sector bodies through SPCs. If, through future studies, the recycling of capital thesis is found to be operating in practice, it would be more accurate to argue that private sector partners have an on-going series of short-term relationships with public sector bodies.

Third, the development of the PPP equity market brings into question the basis of "whole life" costing benefits. If the primary partners can exit a project after six years, their planning horizon no longer fits with the whole-life of a 25-30 year PPP project. As noted above, there is already a concern that long-term contracts reduce flexibility and constrains the introduction of new technologies (McQuaid and Scherrer, 2010). There is now a real prospect that those involved with the design and negotiation of PPP contract specifications will not have the responsibility for delivering the contract service, over the majority of its term. The implications of this are currently unknown but are likely to include increased costs related to contract renegotiation or service redesign and lower of project performance (Gatti, 2018).

The emergence of this market in PPP equity transactions also brings in to view a number of research-related tasks. For example, there are implications for ownership transparency, democratic accountability and value for money for the taxpayer, all of which require future research and *ex post* evaluations (Andon, 2012). As do the potential impacts on service delivery with some PPP projects becoming majority or wholly owned by investment funds. Further the growth of (offshore) infrastructure

funds also raises questions concerning tax avoidance and secrecy. While this paper has focused on the UK, equity transactions are taking place in PPP projects based in other countries, especially as supranational bodies like the IMF and World Bank are now advocating PPPs for developing economies (see Hodge and Greve, 2018). This means there is an increased scope and need for further work analyzing and comparing equity sales in different jurisdictions.

Further, there is a pressing need for research into the actual (as opposed to prospective) rates of return and claims of profiteering by private sector partners in SPCs; especially as the reforms by the UK government through PF2 are geared towards generating more equity transactions in the future (Hellowell, 2013).

The above future research agenda will necessarily aid the emergence of a framework to evaluate the performance of PPP projects. However, our argument is that if we do not understand the nature of (and by extension the rationales for using) PPP projects to procure public infrastructure assets, we will not be able to develop appropriate performance evaluation frameworks. Therefore, if Spackman's (2002) rationales for using private finance and private operators do not stand up to the emergence of the PPP equity market, this raises the broader question, what is the nature of PPP policy?

We posit that a satisfactory answer to this question is unlikely to come from further developing more accurate or detailed rationales from existing theoretical perspectives. Instead we contend that there is a need to reassess the existing theorizations, developed to understand the reform process of public services over the past forty years. Further, such theorizations are unlikely to be successful if they remain single discipline-focussed; as Hodge et al. (2018: 9) note there has 'been disappointingly

little cross-over between the disciplinary groups to date'. We outline one such a theorization in the final section of this paper.

6. Conclusion

The data and analysis in this paper has sought to provide an overview of the size and scope of the emergent market in PPP equity transactions. We have shown how this market has developed from the late 1990s covering transactions worth over Stg. £10 billion. The market was initially composed of primary investor selling their shares to each other; however, from 2006 onwards infrastructure investment funds have established a presence becoming the dominant market actors latterly. This data is the empirical contribution of the paper.

We have also sought to provide a theoretical contribution by asking what does the emergence of this PPP equity market tells us about the nature and rationale of using PPPs for public infrastructure projects? In the literature review we located this study in the sub-stream of work that has address the merit and worth of PPPs (Broadbent and Laughlin, 1999; Hodge and Greve, 2008, 2018). We noted that existing research has argued that the justifications for using PPPs are 'either inadequate or just plain wrong' (Boardman and Vinnings, 2012: 119). To explore this further we followed the direction of argument pursued by Spackman (2002), who advanced three additional justifications for using private finance in PPPs – contract monitoring, long-term commitment and whole-life costing. We argued that these three justifications are at least brought into question, if not completely undermined, by the emergence of the market in PPP equity. For example, if a primary private sector partner can exit a PPP project after six years there is clearly no long-term commitment and little incentive to adequately cost the project over the remainder of its life.

As a conclusion to this paper we sketch an interdisciplinary theorization that seeks to explain the emergence and nature of PPP projects, in the process setting out the basis for a theoretical contribution. The sketch that follows draws on public management, critical geography and political economy disciplines. Hodge et al. (2018) note that the PPP agenda always fitted into New Public Management (NPM) 'like a glove'. Following this logic, the question of what does NPM fit into arises? We respond by seeing NPM as the public management expression of the broader neoliberalization of society (Harvey, 2005); where neoliberalism is understood as a theory of political economy practices that seeks to extend market relations to every aspect of human behaviour (Harvey, 2005). Neoliberal reforms arose as a response to the economic crisis of the early 1970s and the crisis of profitability (Harvey, 2005; Roberts, 2016). In such circumstances, there was a need to restore profitability rates by releasing public assets at little or no cost to the private sector, so that 'overaccumulated capital can seize hold of such assets and immediately turn them to profitable use' (Harvey, 2003: 149)[6].

We therefore posit that at its deepest level of abstraction the nature of the PPP project is about restoring the profit rates of private sector firms. The corollary to which is that the rationales and motivations for PPPs that are advanced in many disciplinary literatures (e.g. Andon, 2012; Hodge and Greve, 2017) are actually *ex post facto* justifications. Such rationales and motivations do not provide a basis on which to build a performance evaluation framework for PPP projects; however, exploring the performance implications and priorities through the interdisciplinary theorization sketch outlined above, may provide a much more fruitful direction for future research.

[6] Harvey (2003, 2005) labels this process *accumulation by dispossession*.

For example, at the project level this approach would be able to address Hodge and Greve's (2018) new research agenda question – What are the impacts of the financialisation of infrastructure projects? (2018: 6) – by drawing on the extensive literature on financialization from several disciplines (see Christophers, 2015; Froud et al., 2000; O'Neill, 2013). This is a challenging conclusion to reach; however, when the existing justifications for a policy are shown to be inadequate or wrong, it is necessary to think differently about the subject matter.

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