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# **Patient and impatient capital: Time horizons as market boundaries**

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## **Abstract**

Since the 1980s privatisation and outsourcing have been promoted on grounds of efficiency and fiscal convenience. The argument here is that the appropriate choice between business and public enterprise is determined by the interaction between two time horizons, a financial time horizon and a project time horizon. The prevailing interest rate defines a credit time horizon. Among project appraisal methods, the payback period defines a unique temporal outer bound for private sector break-even. Net present value break-evens (and other forms of business credit) are always shorter. Any project which has a break-even longer than the payback period cannot be funded by business alone. Long-term projects encounter uncertainty and attempt to control it by means of rigid contracts, which also lead to inferior outcomes. This analysis accounts for historical patterns of enterprise. It also provides normative guidance. Public-private partnerships for infrastructure development intended to overcome credit time boundaries. They have given rise to inefficiency and corruption and are currently in decline. It is possible to overcome the temporal boundary with a 'franchise' i.e. protection from uncertainty provided by social and government agencies. This allows longer credit break-evens, but at a cost in competitive efficiency. It is also prone to corruption. The time-horizon model undermines the standard argument for market superiority. It turns Hayek on his head: it is financial markets that require certainty, whereas social and public agencies manage in its absence.

JEL classification codes: H4, H43, H44, L32, L33, L38

## Patient and impatient capital: Time horizons as market boundaries

The future will be present one day, and needs to be cared for. How much and how far is affected by uncertainty, which expands into the future. A preference for market mechanisms has dominated policy since the 1980s and if markets will provide, why is the long-term a problem? The argument here is that the discount (or interest) rate gives rise to a credit time horizon which imposes financial constraints on market provision. Within this boundary private enterprise does and should provide. Beyond it private enterprise alone does not suffice. This is consistent with the historical record.

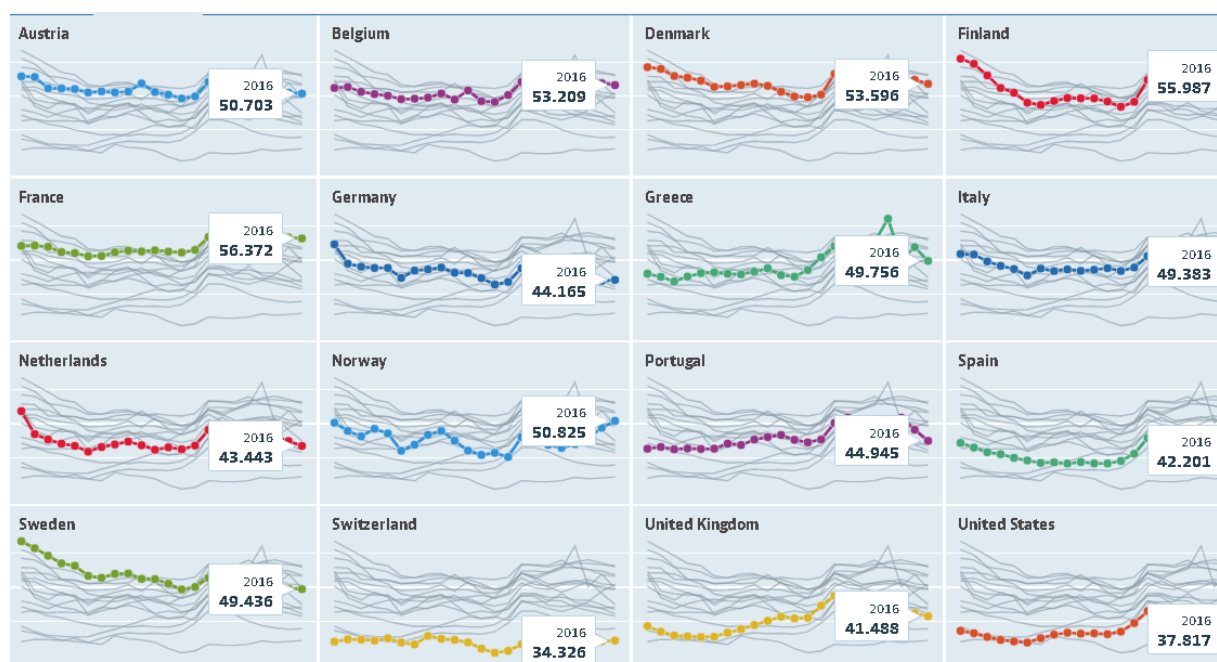


Figure 1. General government spending as percentage of GDP, selected OECD countries, 1995-2016.

Source: OECD (2018), General government spending (indicator). doi: 10.1787/a31cbf4d-en. (accessed 15 March 2018) <https://data.oecd.org/gga/general-government-spending.htm>

Note: Background: OECD all countries.

Despite the ubiquity of market advocacy the public sector has not contracted. Public spending typically allocates 40 to 50 per cent of GDP in most advanced countries. This level appears to be trendless and counter-cyclical, and despite austerity policies, was rising after 2008 as a proportion of expenditure (figure 1). In outliers (the United States and

Switzerland), healthcare is in the private sector but Swiss health insurance is compulsory making it into a tax, and in the USA it is costly and inadequate.

This persistence of the public sector remains largely unremarked. In the discipline of economics, support for public provision and public enterprise is thin. The size of the public sector suggests that something more powerful than ideology may be at work, that the private-public boundary arises out of economic fundamentals. What these might be is our subject here.

## I

### **The argument**

The intuition is simple: in commercial undertakings, the higher the interest rate, the shorter the time to break-even, and the more difficult it is to undertake long term projects. This is all that the argument requires, but it can be made more precise. In any economy there is a current prevailing interest rate. We take this rate to be the actual one given by policy or the market, i.e. not a ‘natural’ economic equilibrium (a theoretical construct which is difficult to identify). This actual interest rate (adjusted upwards or downwards for the risk of any particular enterprise) defines a break-even boundary in the future. Any commercial undertaking must recover its initial outlay within this boundary. Its opportunity cost is the option to lend at that interest rate. If a project needs longer to break even, it cannot be undertaken by business alone. It requires social intervention through philanthropy, ownership, subsidy, management, regulation, not-for-profit organization, a concession, a franchise or a licence.

A bank loan comes with precise schedules for service and repayment. But many desirable enterprises have indeterminate or distant break-even horizons and to forsake them entirely would be self-defeating and sometimes impossible. Government can undertake or support long-term projects even if the prospect of success is uncertain, by spreading the risk across society. In contrast, short-term projects within the credit time horizon reap the benefits of competition and are typically undertaken by private enterprise. This suggests a division of labour: business for short-term provision; government, not-for-profits and the family for undertakings with a long or uncertain social and economic duration. This division is descriptive and prescriptive. It predicts where the actual boundaries are likely to run, and suggests where they ought to be placed. If boundaries are violated in either direction poor outcomes are likely, inefficiency, corruption or failure.

Economic undertakings have a typical duration: winter wheat is planted in the autumn

and the outlay is returned with a surplus seven or eight months later: tillage, fertilizer and seed are easy to finance with bank credit since payoff is imminent. In contrast, a stand of hardwoods (black cherry or maple) is impossible to finance from scratch with bank loans: ‘during the first 50 years, the tree is worth, at best about a dollar or two for pulpwood’ (Jacobson 2008, 7). This delay is well beyond ordinary business time horizons. Pre-existing stands can be cut down but new growth requires subsidies or tax relief.

Many social projects cannot be financed with bank credit alone. A random list includes nuclear power, science, national and municipal parks, major railway projects, mitigating climate change, universities, museums, aircraft carriers, opera, the Cold War, and space exploration. Asset time horizons determine ownership and control. In telecommunications, for example, copper landlines may last a century, the exchanges for decades, the handsets for years. Like most network utilities, landline telephone systems were innovated privately but became regulated monopolies or state enterprises. In contrast, mobile phone technology changes about once in ten years, and handsets last for about two. The presumption is for private ownership and it is difficult to find a state-owned mobile phone company outside Communist countries. In China, a hybrid economy, handsets are made privately, while the four mobile networks belong to the state and compete.

## II

### **Credit time horizons**

Assume a project in which costs are covered by an initial outlay, financed by a bank loan, which is serviced annually out of revenues. This is not realistic, but it doesn’t matter – it only defines a boundary condition. The credit time horizon is the time it takes a lender to break even on a loan out of annual interest payments. To return more than the going interest rate, a business has to break even on the loan in a shorter period of time than the bank. The ‘payback period’ criterion of investment appraisal is the time that it takes for revenue flows to add up to the principal: ‘counting the number of years it takes before the cumulative cash flow equals the initial investment,’ (Brealey et al. 2011, 133). This method is not recommended because it ignores the time value of money (it regards a dollar tomorrow as worth the same as today) and also any cash flow beyond the break-even point. Nonetheless it is widely used in business and is included in investment manuals (Blatt, 1983, ch. 13; Thiebeierge and Beresford, 2015, 80-81). In the 1990s payback was used routinely by the majority of large corporations in a survey in the USA (Graham and Harvey 2001, 196-200). In the UK payback was used more frequently than discounting methods in the 1970s and 1980s, with 78% of firms preferring it in Scotland (Sangster 1993, 309, 314).

The payback method of appraisal is not recommended here for operational use, but serves merely as a diagnostic procedure. It defines a boundary condition: a unique point in the future, which is the furthestmost one for bank credit to break even using the payback method. Regardless of the source of financing or investment appraisal procedure, commercial projects have to break even in less time than that. Projects with longer break-even durations cannot be undertaken by business on its own, except when the asset is plundered, or the payoff is highly speculative.

Take an open-ended interest-only bank loan which can be rolled over when it expires. Assets of this kind were common in the nineteenth century. The British government borrowed against perpetual bonds (Consols), and Victorian housing was financed with interest-only mortgages. A lender advances £100,000 at 10% interest a year. After 10 years, interest payments add up to the sum of the original loan (inflation is ignored). This lender's payback period is the outer bound for break-even: a business borrower's break-even time horizon is always shorter. Governments typically pay half as much interest as business, and that doubles their time to break-even (Great Britain HC Treasury Cttee 2011, 3; Great Britain NAO 2015, 41-50, esp. 47-50). And they don't even have to break even.

Business requires a profit, hence the borrower's break-even will be shorter than the lender's. Net Present Value (NPV) is an estimate of the current value of future project revenue flows after it is discounted for the duration anticipated (Thibierge and Beresford, 2015, 76-77). To avoid a loss, this discounted total must be greater than the principal borrowed. A project is worth undertaking if the NPV is positive.

Figure 2 below plots the payback periods and NPV of a 10% interest-only loan of £100k. At 10 percent interest the 10 years credit payback period forms an outer bound break-even period for the loan. When the NPV of the same investment is set to break even after ten years, it requires a non-discounted payback cash flow of 16%, which implies an actual break-even period of a little more than six years, i.e. much shorter. The payback break-even thus forms an outermost time horizon for business break-even.

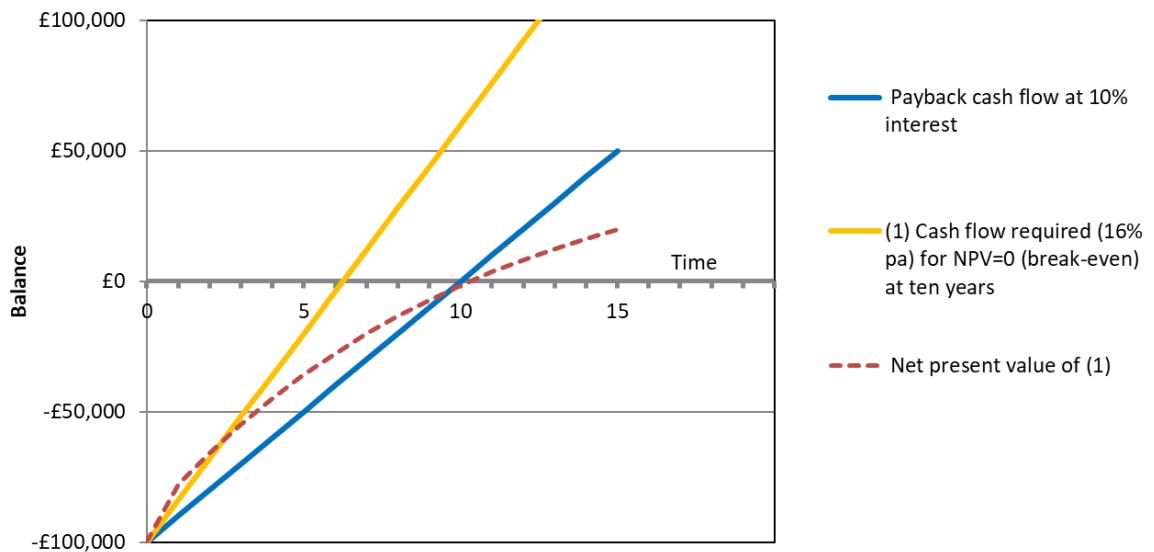


Figure 2. Balance and break-even points of an investment financed by a loan of £100k at 10% interest.

This may provide a clue about the continued use of the payback method. NPV is an estimate of anticipated revenues while payback is retrospective. Actual revenues are not discounted, and it is no less rational to estimate outcomes ex-post than ex-ante. For business the size of a return when it becomes available may be more relevant for planning than its speculative value today.

If a project cannot turn a profit, it might still be worth doing. This requires taking all costs and benefits into account, including external and social ones. Whether it is deserving of public support is a matter for cost-benefit analysis, itself hedged in with unrealistic premises, incomplete information, risk and uncertainty. The issue here is not whether such projects are worthwhile, which is often difficult to say, but that they cannot be done for profit.

### III

#### Uncertainty

Formal project appraisal assumes fixed and certain revenue flows, underpinned by formal credit contracts. But uncertainty is pervasive and undermines these expectations. In figure 3, plotted by central bank statisticians, uncertainty fans out into the future. The uncertainty here is about the future rate of inflation, which is closely related to the discount rate. Uncertainty has been modelled as the opportunity cost of postponing the decision. An irreversible project is a commitment to the unknown, and irreversibility can be thought of as an extra cost. When this is added to borrowing costs, it pulls the break-even period further back from the payback

boundary. Reflecting this, the USA corporate ‘hurdle rate’ for investment has been observed to be typically three or four times the cost of capital (Dixit and Pyndyk, 1994, 7).

Three key parameters of the fan chart

Figure 3.3

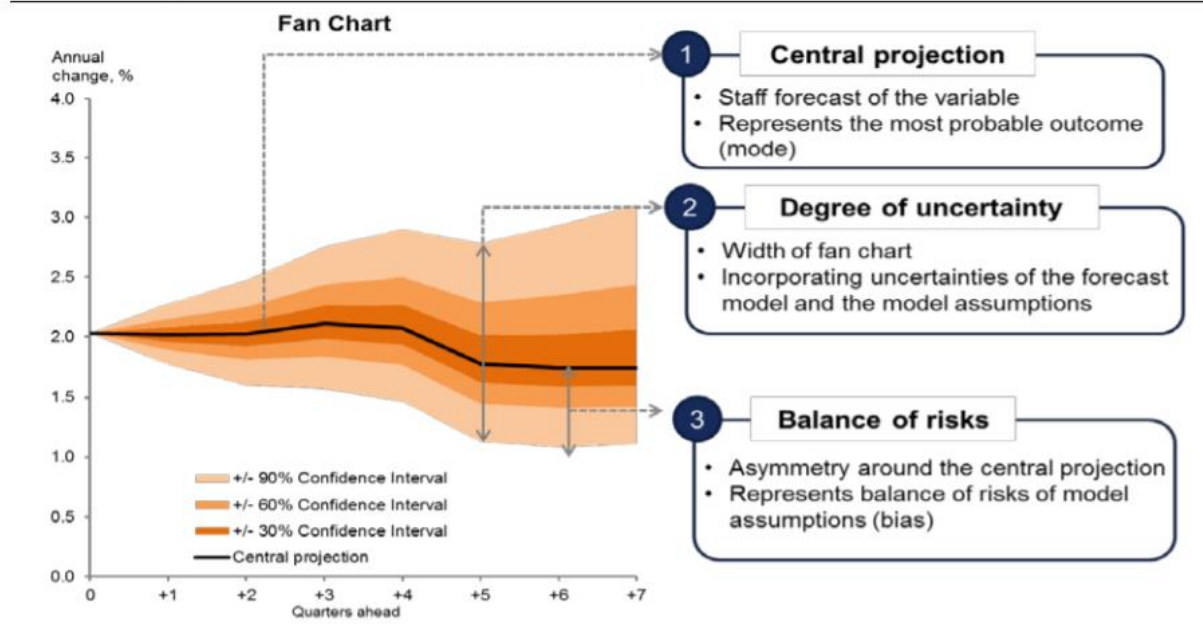


Figure 3. Inflation fan chart.

Source: Razi and Loke 2016.

A long-term project sets off cascades of uncertainty (Grimsey and Lewis 2004, 172). Any list would include specification and design, construction (on time and budget), quality risk on completion and in use, operating cost, sustaining demand and revenue, interest rate/inflation, financial risk (provision and price), default of contractors, residual value risk, regulation and politics, environmental change, wars and civic disturbance, and unknown unknowns.

Large projects are not completed on time and budget. ‘The iron law of megaprojects’ is ‘over budget, over time, under benefits, over and over again’. The exceptions are outliers, one to eight projects per thousand (Flyvbjerg 2017, 13). This causes dismay among clients and academics. One common explanation is psychological, namely over-optimism on the part of clients and contractors. Another is bad faith, namely that bidders mislead clients with unrealistically low estimates, while exaggerating the benefits (Flyvbjerg et al. 2002).

The iron law may arise, however, because the wrong benchmark is being used. This is another piece of metal, the ‘iron triangle’ of cost, time and quality, specified at the outset.

The original specification is thereby given authority which it cannot bear. Long-term projects contain too much complexity to specify completely in advance and it is therefore wrong to regard initial time and cost estimates as binding (Atkinson, 1999). In both economics and law it is understood that contracts are incomplete, i.e. that it is impossible to specify every contingency in advance (Hart, 1995; Hart 2003). The initial specification should also be regarded as tentative.

The full benefits of a project and the way of achieving them cannot all be known in advance. Both client and contractors learn as the project moves ahead, and this often calls for specifications to be revised. Learning by doing is a major source of productivity improvement (Arrow 1962). Why was it impossible to jump directly from the very first smartphone to the current model? Progress is incremental. Aircraft, computers, software, and most technologies, improve year after year. From that perspective, a long-term project is a ‘Great Leap Forward’, and it is misguided to expect everything to follow the plan. This is not a matter of virtue. Bad faith may well be involved, but even with the best intentions mistakes and overruns are inevitable. The question is how to deal with them. Adherence to inadequate plans is the wrong benchmark. Indeed, it is completion on time and within budget that should be suspect. Long-term projects are learning enterprises. ‘Did they do it right?’ is not the same as ‘did they get it right?’ A project may be completed at expected cost, time and quality, and still be unfit for purpose. The need to lock down, however good for finance, is likely to undermine quality.

The Sydney Opera House is iconic. But it cost fourteen times the initial estimate, and the architect who conceived it had to be removed. From the sublime to the trivial: while constructing a wall in my garden it became clear that an additional line of bricks was desirable. Stick with the estimate or pay more? The lesson is that friction is intrinsic to projects.

The ubiquity of overruns suggests two implications. The prime source of rigidity is finance, especially bank finance which locks in payback schedules. When schedules are missed projects can go into terminal failure (Flyvbjerg 2017). For the lenders their own rigidity raises the risk of default which then requires a higher return to cover. It is difficult to know whether bad faith is not implicated. Long-term projects inevitably give rise to asymmetric information in which the supplier knows more than the client. This ‘agency problem’ presents opportunities for cheating. The only complete solution to the problem is credible trust, which highlights the crucial role of good faith when trying to overcome credit time horizons (Weihe 2010, 516-519). We shall now consider two other solutions, public-

private partnerships, and franchise.

## IV

### **Public-Private Partnerships**

Public-private partnerships are designed to overcome the credit break-even time horizon. Introduced in the 1980s, they have spread massively throughout the world, especially in middling-income developing countries and in English speaking ones. Three decades later their flaws are evident and PPPs are in retreat. This trajectory demonstrates how transgressing credit time horizons is fraught with trouble.

In public-private partnerships, a public agency commissions a project from a corporate consortium, usually a ‘special purpose vehicle’ (SPV) created for the purpose. The SPV raises the money, constructs the project and delivers the service. The public authority pays a regular fee which combines loan service, capital repayment and service charge. Typically, about half the payment is to service and pay back the initial finance (Great Britain, NAO 2018, 26). Payment is guaranteed for the economic life of the project, e.g. twenty five to thirty years for schools and hospitals in the UK, regardless of continuing suitability or need. In the UK partnerships are contractually insulated from changes in the government budget, and payments are linked to the retail price index. The SPV structure is designed to protect parent companies from project liabilities. Special purpose vehicles are formed to satisfy the requirements of the lenders, i.e. to make the projects ‘bankable’ (Finnerty 2013, ch. 2; Bayliss and Van Waeyenberge 2018, 580).

Their primary purpose is to provide the security of a government guarantee for commercial credit. In consequence, and unlike ordinary investments, the interest rates on PPP loans are insensitive to the maturity date (Blanc-Brude and Strange 2007, 103-105). The project is converted into a fixed-income financial asset with the security of government debt, but at much higher commercial interest rates, typically two to three times as high (Finnerty 2013, ch. 2; Hare 2013, 100).

Public-private contracts are an innovation of the late 1980s which diffused to developing countries at the behest of the World Bank as part of the ‘Washington Consensus’, in which the international monetary and credit agencies imposed market-friendly reforms as a condition of access to credit. These ‘structural adjustments’ were designed to secure the exports required to service foreign loans. The IMF and the World Bank provided loans, guarantees, and intermediate access to much larger private loans (Noumba-Um 2010, 472-3; World Bank 2015; Offer 2016, 233–246).

The PFI contractual framework provided a secure outlet for the funds of large banks

and financial institutions in the United States, Britain, Europe, India, and Japan; and also a lucrative role for international consultants, suppliers and contractors (Finnerty 2013, ch. 5; Bayliss and van Waeyenberge 2018; World Bank 2015; World Bank 2018, variable debtp).

The Washington Consensus is now discredited, and the experience of PPP is mixed. This is reflected in the trajectory of these ventures. Their implementation internationally peaked in 2013 at about \$220 billion of investment a year in less developed countries. Since then private public partnerships have gone into steep decline (figure 4). The payments however will continue far into the future. The attractions of PPP for lenders remain large, and financial institutions, the G20 and the UK government are still trying to pump it back into life (Plimmer and Parker 2017;Dujovne, 2018; Bayliss and van Waeyenberge 2018).

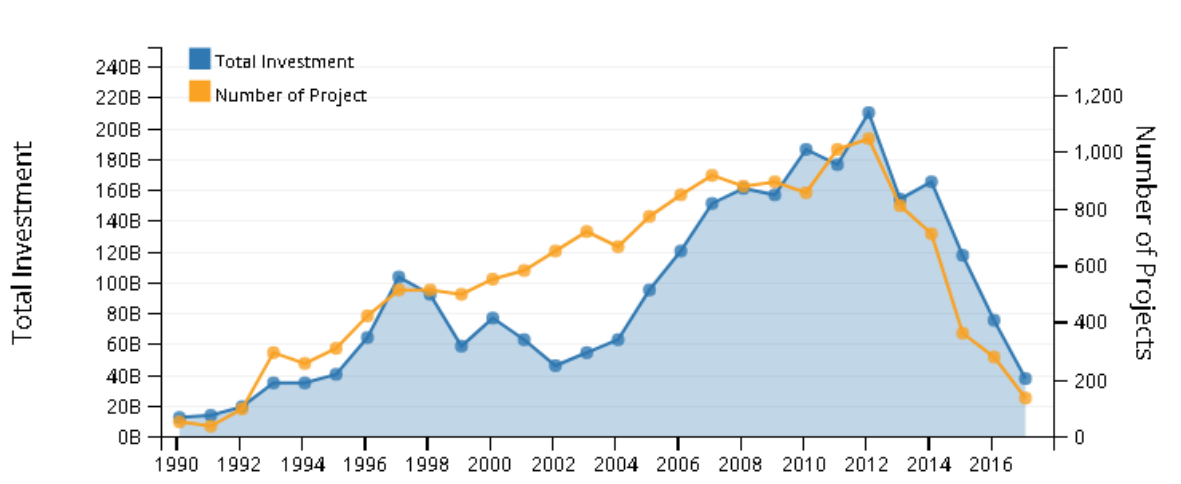


Figure 4. Public-Private partnerships in in medium- and less-developed countries, 1990-2016.

Source: World Bank.

<https://ppi.worldbank.org/visualization/ppi.html#sector=&status=&ppi=&investment=&region=&ida=&income=&ppp=&mdb=&year=&excel=false&map=&header=true>

V

## PFI

The British version, the Private Finance Initiative (PFI), was introduced in 1992 by a Conservative government. The Labour Party embraced the idea while still in opposition, and when it came into power, applied it on a larger scale (Brown et al. 1994; Foot 2004; Hellowell 2010). Coming into power after a long period in opposition, New Labour strove to placate financial markets with sound money policies. In particular, it wanted to comply with the Maastricht Treaty limit of borrowing no more than three percent of GDP a year, and its own self-imposed ceiling of forty percent of GDP in public sector debt. PPP was recorded in the National Accounts not as public borrowing but as current expenditure. PFI appeared to

offer an opportunity to undertake new investment in public services without the debt showing on the balance sheet. That is widely understood to be the prime motive (Hellowell 2010; Foot 2002, 11; Nelson and Hoskin, 2008; Atkins et al. 2017, 15-16; Great Britain HC 2018, 3).

This opportunity was enticing for Labour in opposition, as early as 1991 (Brown et al. 1994, 13-14), but not a word of it has appeared in subsequent official justifications. Instead, the argument was that PPP was better value for money (GB Treasury 2000, 16-17; 2003, 1-2-; Great Britain HC 2011, 8-16). Every PPP project was meant to be tested by means of ‘Value for Money’ comparisons with a public sector alternative. Commercial finance costs at least twice as much as public borrowing. The comparison had to show, therefore, that private efficiency was more than double that of the public sector (Brown et al. 1994, 14; Edwards 2005, 11-20; Hare 2013, 98-106). Superior efficiency was meant to be achieved by means of ‘risk transfer’, i.e. that the greater capacity of the private sector to absorb risk would more than offset the higher cost of finance. Government documents insisted that PPPs were more efficient, and even quantified the savings achieved over public sector comparators (GB Treasury 2000, 17-18).

These savings were soon shown to be bogus. ‘The only publications which are broadly positive about PFI tend to be those that have been compiled by official bodies as part of their statutory remit’ (Wall and Connolly 2009, 712). The Value for Money tests were biased to find in favour of PFI (Gaffney et al. 1999a, b; Pollock et al. 1999; Pollock et al. 2002; Heald 2003; Edwards and Shaoul 2004; Pollock 2005; Great Britain Treasury 2011; Great Britain NAO 2011, 2013, 2018; Siematycky and Farooqui 2012; Boardman and Hellowell 2016; Atkins et al. 2017). The UK National Audit Office has shown that the purported value for money advantage was razor-thin even using the Treasury method, while alternative measures showed it to be substantially negative (Great Britain, NAO 2013, fig. 4, 19; Fig. 6, 25).

The biases took a variety of forms. The most important was the costing of risk transfers. At the outset the cost and completion record of PFIs was better than the public sector comparator, but the public sector caught up, and in later reviews any advantage was small (non-PFI in brackets): in a survey in 2008, 69 (65) percent of PFI projects had delivered on time, and 65 (54) percent within budget (Great Britain, NAO, 2009, 7-8). It has to be shown that the difference has a practical significance. Even if it does, as we have argued above, that is not necessarily a virtue. PFI budgets may also have a better record of cost containment because they embody a premium for potential cost overruns: they tend to be

about a quarter more expensive than public sector equivalents, and costs often escalate between announcement and signing of PPP contracts, when the benchmark is set (Boardman et al. 2016, 17 ). For PFI the clock starts ticking only after a long-process of negotiation and planning, making completion look more timely than it is (Boardman et al. 2016a, ii). Marginally more timely completion is hardly a justification for thirty-year contracts: that could be achieved by a contract for construction alone. With all the specific contracting required, lawyer, consultant and accountant fees on all sides were high, estimated by the European Investment Bank at 3.5 percent for the public sector, 3.8 percent for the winner and about 5 percent for failed bidders, for a total of 12.3 per cent (Dudkin and Väilä 2005, 14). The discount rate for the public sector comparators was fixed in 2003; after 2008 this was twice as high as the rate at which government was borrowing but the comparator remained unchanged, thus inserting a bias against the public sector (Great Britain, NAO 2018, 20). In response to such criticism the Treasury withdrew its value for money guidance in 2012.

Initially the Treasury promised careful retrospective evaluations of the projects (GB Treasury 2000, 32), but none have been undertaken: there is no official retrospective analysis available to show whether or not PFI has in fact delivered value for money, and none is envisaged (Great Britain, NAO 2018, 19-20; HC 2018, 5). This is also the case more generally for PPP (Hodge 2010, 94-105). Details of PFI projects were protected by ‘commercial confidentiality’, which placed them beyond scrutiny (Siemiatycky and Farooqui 2012, 288; Jubilee Debt Fund 2017, 5). If PPP superiority had been clear-cut we can be sure that such studies would have been forthcoming. External evaluations of individual projects showed poor value for money (e.g. Edwards et al. 2004).

Insurance is based on the principle that every individual risk is pooled with many others. The larger the number, the cheaper the insurance. Hence the public sector, whose resources encompass the whole of the tax base, can insure more cheaply than a private entity. Public sector comparators were also typically imputed a premium for ‘optimism bias’ and ‘risk transfer’; but if the public sector has to pay a premium to the SPV in order to avoid the risk, there is no risk transfer: a fair premium represents the objective risk and some profit in addition (Boardman et al. 2016, 9).

Uncertainty cannot be dissipated by mere contract. The government was exposed to supplier default, while still being locked into the projects. The risk of failure could not be handed over: If the SPV fails, the parent company can walk away, but not the government. PFI contracts are typically ‘no recourse’, i.e. a form of limited liability in which the failure of the SPV does not involve the parent companies (Edwards et al. 2004, 97;Zhang 2005, 657).

In several massive instances the contractor has indeed failed and walked away. The Channel Tunnel company was set up as a free-standing private enterprise project with no subsidy, but when it failed the government had to take over (Finnerty 2013, ch. 20); The £3bn Channel Tunnel rail link PPP required successive government rescues (Wikipedia 2018); the £15.7bn 30-year Metronet Underground maintenance contract and the parallel Tube Lines PPP reverted to public management (Wright 2007; Private Eye 2007; Economist 2008; BBC 2010); several hospital and IT projects faltered (Robinson 2001, 104-106; Carr-Brown and Gould 2003; Edwards 2005; Carvel 2005; Timmins 2011; Wikipedia 2017). Carillion, the second largest government contractor, collapsed in January 2018 with more than £2bn of unfinished projects (Plimmer et al. 2018). In the aftermath of the financial crisis, when lending dried up, the government stepped in and provided the missing funding (Barker and Timmins 2009).

Over and above the cost of credit, PFI projects incurred several additional costs which did not affect public sector projects. PFI typically paid insurance premia, while the public sector self-insured. Contractors held large cash balances and paid extra fees to consultants and lenders (Great Britain, NAO 2018, 16). The taxes incurred by SPVs were given as a reason why the public sector (which pays no taxes) has lower costs (Baumol 1968). But much of the profit found its way to tax havens (Timmins 2011; Jubilee Debt Campaign 2017, 4; Whitfield 2017; Great Britain NAO 2018, 20). Offshore funds owned about half of the equity in PFI projects, typically paying less than one percent in tax on their PFI profits. But one argument in favour of PFI had been the corporation tax due to be paid on the profits (Great Britain, HC 2018, 6). The most risky stage of the project was the initial one of design and construction. Once that stage was over, assets were often re-financed more cheaply or sold on at a large profit. Public sector efforts to share the gains had only limited success (Great Britain HC 2007; Whitfield 2012; Jubilee Fund 2017, 4).

In consequence, PFI turned out to be expensive. By 2013, nine out of ten government departments would have bought out their PFIs if they could. They were still paying high pre-2008 interest rates (Great Britain, NAO 2018, 32). Local authorities, with no independent sources of finance, were told that if they wanted to build it was PFI or nothing. It was ‘the only game in town’. Likewise for the NHS (quote (from 1999, Great Britain HC 2011a, 7; Edwards et al. 2004; Grimsey and Lewis 2004, 362; Timmins 2011; Great Britain HC 2011b, 33; Hare 2013, 109-110). But no additional funding was provided for the extra cost so services had to be reduced. When NHS hospitals were constructed under PFI, they typically had fewer beds than the ones they replaced (Edwards et al. 2004, 152).

For those who promoted them, the main difficulty was packaging these projects in ‘bankable’ forms. So despite the purported advantages of PFI it only twice exceeded 10 per cent of annual government capital expenditure in the UK. Figure 5 shows the trajectory of PFI, and also how, as in the world more broadly, it has gone into steep decline. In Britain, PFI has run its course (Great Britain HC 2018, 7).

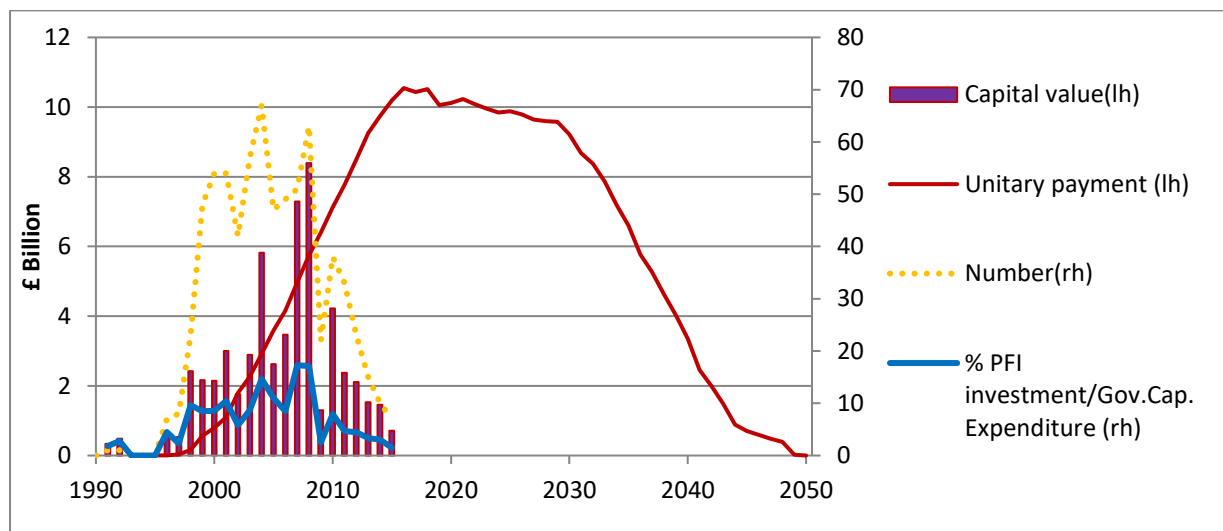


Figure 5. PFI investments in the UK.

Source: UK Treasury.

Note: Unitary payment is the ongoing combined debt and service charge. Typically about half is debt service.

## VI

### Qui bono?

PFI has failed. Despite a renewed commitment by conservative governments and attempts to fix its defects, the number of new projects has declined almost to nothing. ‘These schemes are now widely discredited’ wrote the *Financial Times* (2017). The left-wing leadership of the current Labour Party has threatened to cancel many of the existing contracts (Packard and Plimmer 2017). But most of the liabilities still lie in the future and will continue to be paid until the middle of the current century (Figure 5).

Placing debt off the balance sheet was a deception which provided no benefits. It was a ‘fiscal illusion’, no more than an accounting trick. There was no saving, just the opposite. A much higher cost was imposed on future taxpayers in order to present the semblance of prudence and self-control (Irwin 2012; Great Britain NAO 2018, 12; Great Britain HC 2018, 3, 15-16). Contractual rigidity hits hard, with local authorities continuing to pay for empty unwanted buildings or for sub-standard ones (Jubilee Debt Fund, 5-7; Great Britain NAO

2018, 17). Some £47m will be paid eventually for a school in Liverpool which has stood empty since 2014 (Great Britain HC 2018, 6).

Why was PFI sustained for so long? Initially even Conservatives, the party of business, had been sceptical. It was rejected by the Treasury and by Keith Joseph as early as the 1970s (Levitt 2012). The former Conservative Chancellor of the Exchequer Nigel Lawson told the House of Lords in 2018,

My Treasury officials [in the 1980s] were keen on it but I refused to have anything to do with it. Subsequently, my successors—particularly, but not exclusively, Mr Gordon Brown—were enthusiastically in favour of it. Its purpose, in the eyes of the Treasury officials who tried to persuade me to take it up, was that it enabled you, at least in the short term, to dress up considerable amounts of public expenditure and put them off the public sector balance sheet. That is not a good reason for adopting something which, in my judgment, does not give good value for money for the taxpayer, and it introduces a degree of moral hazard, which we see very much in the Carillion affair....We have now had enough evidence that it is not good value for money and therefore not sensible from the point of view of the taxpayer.

(Lord Lawson of Blaby, House of Lords Debates, 15 January 2018, 5.06pm, <https://hansard.parliament.uk/Lords/2018-01-15/debates/7A0A7562-2707-4D27-BE58-03EDF06E07E4/Carillion>)

Behind PFI was some magical thinking. ‘Mr Blair and Mr Brown talk as if the PFI was free cash, a capitalist cargo cult from their friends in the city’ (Jenkins 2002). A thread in New Labour thinking was ‘additionality’ as a method of circumventing Treasury prudence. The real test, Brown wrote while still in opposition, was not whether PPP was value for money, ‘The real comparison should be between the cost of private finance and the cost (economic and social) of not undertaking the project at all’ (Brown et al. 1994, 14). This is the only underlined sentence in a 22-page document. But the constraint was self-imposed. Brown would only borrow up to forty percent of GDP but Maastricht allowed him sixty. And no European Union country was ever punished for exceeding a three percent deficit.

The good-faith explanation is to accept the off-budget reasoning at face value. This is not straightforward, since this explanation has no face: it was never made openly. If it was undertaken in good faith, then this bookkeeping adjustment was embraced without due diligence. If Lord Lawson is right, then some explanation is called for, but none ever came, at least not in any sources I have seen. PFI is mentioned only once in passing in the Treasury’s

bulky high-class apologia for New Labour (Brown, Balls and O'Donnell, 2002), and there merely as an efficiency measure. Despite continuous denials, the Treasury continues to prefer PFI because it does not show as public debt (Great Britain HC 2018, 16).

One might ask who benefits. Howard Davies is a British policy economist, who has worked alternately as a financier and a senior public official. He has been the Chairman of the British financial regulator (FSA), of the government's Audit Commission, Director of the London School of Economics, and since 2015, Chairman of the nationalised Royal Bank of Scotland. He had also worked for several financial corporations. On 18 January 2018, in front of more than two million television viewers, he stated that 'PFI has been a fraud on the people because essentially the government is always the cheapest borrower.' (BBC Question Time 2018).

The benefits went to banks that funded SPVs. Unlike all the other participants, they obtained a revenue flow at commercial rates of interest underwritten by the full faith and credit of the state. Other risks were shifted to constructors, operators, and public sector clients (Lea 2018a). As we have seen, private finance cost at least twice as much as public borrowing. Precisely how much is difficult to know because the contracts are not in the public domain. But finance benefited by more than just the difference in interest rates. In the UK, about 90 percent of PFI projects were financed by debt. Profits on the equity share were higher, typically in double figures up to 15 percent. When they were sold on, projects provided windfall returns. A study 118 sales revealed an average return to investors of 28.7 percent (Great Britain, HC 2018, 11)

There is a question about the financial markup on PFI loans. How much did the lenders pay for the money? One answer to that is very little. It is increasingly understood that lenders can create money at the stroke of a pen if the borrower is credible (McLeay et al. 2014). No borrower is more credible than the state. Syndicating the loans helped reduce liquidity risk. Hence PFI loans could be granted with high leverage and at little cost: for lenders, PFI was a license to print money.

PFI can be understood as a response to the financial sector's quest for yield after 1980. During this decade many of the official restrictions on credit were lifted. The consequence was a surge of credit into assets, primarily housing but also government and corporate bonds and shares. This credit drove up asset prices but also acted to reduce their yields (Offer 2014, 167-170). There is a question of where the liquidity came from. The ten-fold expansion of bank assets during these years cannot have come out of household and corporate savings. The various schools of modern monetary theory argue that credit is

generated endogenously in response to demand from credible borrowers: not that deposits generate loans, but that loans generate deposits (Offer 2017, 1057-1062). The PPP system provided money market returns with a government guarantee that was safe beyond question. In 2018, wrote two academic observers, ‘PPP policy is now driven far more by the availability of global finance than by the previously perceived potential for efficiency gains through privatisation’ (Bayliss and van Waeyenberge 2018, 581).

For fraud to take place, there have to be two parties. The instigator of fraud was the New Labour government which came to office in 1997. The party sought favour with business. Its code word was ‘modernisation’. The term conveyed a disavowal of historical working-class affinities, a quest for middle class voters and acceptance by finance and business (Rawnsley 2001, 298-302). In mitigation New Labour believed that finance had the power to derail its government. It was also influenced by North American market fundamentalism, the conviction that government was powerless to control corporations or defy them (Ramsay 2002, 70-82).

PFI had been launched by the Conservatives, but made little progress because the Treasury insisted that it should always provide better value than public investment (‘the universal test’). Although Labour spoke against PFI in Parliament, the party leaders endorsed it in opposition (Brown et al. 1994). Once in power in 1997 they wasted no time in ramping it up. Geoffrey Robinson, a shadowy businessman and Labour MP came into government as Paymaster General with a mission to make PFI more attractive to lenders (Bower 2001; Robinson 2001). He appointed City bankers to a Treasury task force and recruited an investment banker to lead it. The task was to relax PFI contractual terms. This finally pulled in demand for contracts. The Treasury’s ‘Value for Money’ tests straddled the line between advocacy and corruption. In 2000 the task force was privatised as Partnerships UK (PUK), a majority stake sold off to a consortium of banks, and staffed by corporate lawyers, bankers and consultants in a manifest conflict of interest (Bower 2001, 141-143; Robinson 2001, ch. 8; Foot 2004; Wikipedia 2018c). Treasury official Steve Robson, the department’s privatisation advocate, was knighted, retired, and took up several directorships, including one at the Royal Bank of Scotland. At PUK however he remained the ‘Treasury nominee’ although his bank was a involved in PFI. According to PFI scholar Jean Shaoul, ‘we have a government that acts in the interests of a financial oligarchy’ (Hellowell 2010; Foot 2004; quote, Owen and Brady 2010).

‘Nothing in modern politics is more curious’, wrote a leading journalist, ‘than Labour’s adoption of the most radical privatisation in Europe....Mr Blair has been sold on

there being only one salvation for public services. It lies in the complete reversal of Labour dogma, in subjugating the public service ethos to the “daring” incentive of private profit. The future lies in bankers and lawyers, not public officials and do-gooders’ (Jenkins 2002). For Labour politicians (like social democratic ones everywhere at the time) there was a heady sense of sin, of connection with the high and mighty, of an entitlement confirmed by the voters’ mandate. New Labour fell for grand follies, for the ‘four sublimes’: the techno-challenge of grand projects, the rapture of political monuments, the financial windfalls for all concerned, and the awe of iconic achievements (Flyvbjerg 2017, 6). It was a Faustian bargain: the leadership surrounded itself with people from finance (Great Britain HC 2010).

There are two kinds of corruption. Petty corruption is breaking the rules. Grand corruption is writing them. Making it legal is the ultimate expedient against detection and punishment. ‘Modernisation’ was a code word for supping at the table of mammon. The form of corruption was fiduciary failure: sacrificing the public good for an expediency that was never declared or admitted, and which is hard to pin down; not breaking the rules but re-writing them for sectional and even personal advantage (Rothstein and Varraich 2017, 26). From its very inception PFI was widely and vigorously criticised, not least by public agencies. Its implementation was part and parcel of the New Labour culture of immersing reality in a fog of dissimulation, of a pervasive bad faith which has poisoned trust in government more widely (Rawnsely 2001).

Finance returned the favour: since the 1990s, outsourcing and privatisation opened a revolving door between government and business. Business people go into government to write contracts with their own sectors (Great Britain HC 2010; Transparency International 2011; Brooks and Hughes 2016). Civil servants and ministers find lucrative posts on the way out. Howard Davies, the mandarin who called out the fraud of PFI, had no trouble moving out of financial regulation and into a sequence of financial institutions. In the two years before January 2009, 28 New Labour ministers moved into jobs in the private sector (Transparency International 2011, 13) It has become unremarked for people at the very top of the public sector to move into the firms and industries that they had regulated only a short time before. It would be tedious to list the hundreds of politicians and civil servants who travelled this golden road. Suffice it to name the three leaders of the New Labour revolution, Blair, Mandelson and Brown, who have all won lucrative sinecures with financial companies and consultancies (Brooks and Hughes, 22).

Such reciprocity makes a mockery of rationality in policy and of ‘value for money’: transgressing the credit boundary can be compromising. Given the fluidity of such projects

they depend critically on good faith. They are also prone to its opposite, bad faith and corruption (OECD 2008, 121-124).

## VII

### **The franchise**

Many business ventures have time horizons that are longer than the simple payback break-even. This boundary can also be overridden using the device of the ‘franchise’, defined here as a revenue flow with pricing power, long duration and low variance, with some protection from competition. Its pervasive existence runs counter to the assumption in economics that the superiority of business arises from competition. Private enterprise can only flourish long-term under protection. Inside the credit horizon competition delivers benefits, beyond it a franchise is needed. A franchise provides access to non-bank long-term bond finance which is cheaper, and permits exit at any point.

One form of franchise are natural monopoly network utilities, electricity, gas, water, and landline telephones, or strong commercial brands underpinned by advertising. The state can delegate its ownership of natural resources. Governments support franchises with limited liability, rights-of-way, tax concessions, patents and copyrights, subsidies, guarantees, and bailouts.

Commercial banking, which gives rise to credit time horizons, is itself underpinned by central banking, by its clearing, licensing, and lender of last resort functions, while foreign lending is supported by subsidies from governments and international agencies. Private enterprise relies on public goods: the legal system, the monetary system, transport infrastructure, the skills and abilities imparted in households and public education. Computing and mobile phones depend on access to bandwidth. The ultimate franchise is the state itself: it controls a territory and owns a tax base. But not even the state is entirely secure: it is open to challenge from the outside and can be captured from the inside.

History provides a natural experiment for our model, namely the historical development of the franchise for railways and energy utilities in Europe. Piped water, canals and railways were innovated privately for profit, but not always. The English toll roads (turnpikes) of the 18<sup>th</sup>-century were constructed not-for-profit and the Post Office was a public service. Roads, street lighting, and sewers were deployed by self-governing towns. By the end of the nineteenth century a good deal of the new network utilities had shifted into public hands after hold-up conflicts with their private owners, while the others made use of a public subsidy or least a public sanction (Figure 6).

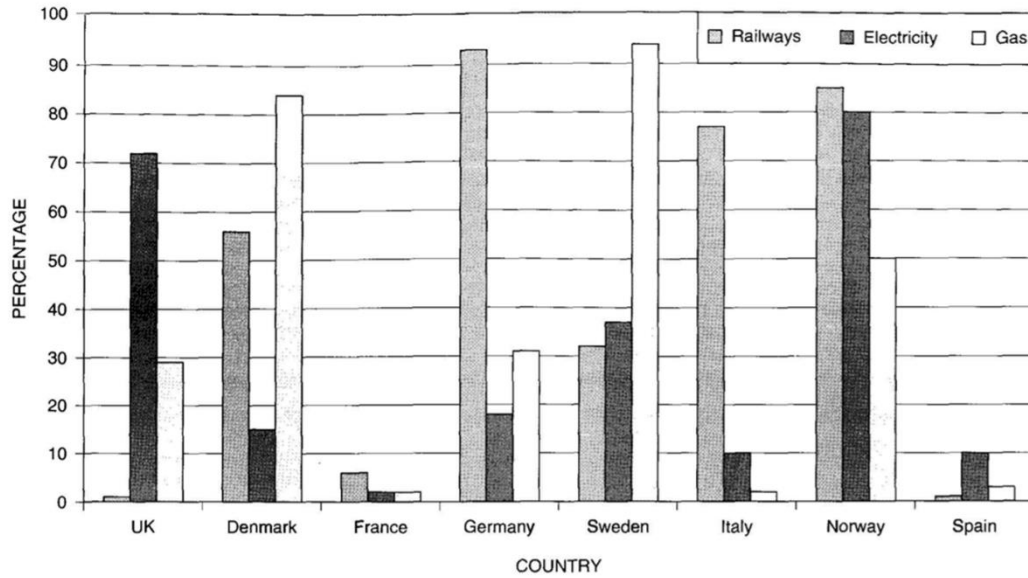


Figure 6. Percentage of Railway and Energy utilities in public ownership in Europe, early 1900s.

Source: Millward 2005, 22.

The railway systems of continental Europe, when they were not built by governments directly, required subsidies and guarantees. Likewise colonial railways in nineteenth-century Australasia, India, and South Africa. North American railways received massive grants of public land. Public ownership was increasingly preferred, and was not inimical to efficiency (Bogart, 2009a, 2009b, 2010; Chaudhary and Bogart 2010; Bogart and Chaudhary 2015). The one apparent anomaly was the first railway system, in Britain. A rigorous study has found ‘that while private enterprise may have been important in ‘kick-starting’ the railway system, it was unnecessary for its subsequent development. Railways could have been nationalized in 1844 (or later) without adverse effects’ (Casson 2009, 26). British railways were authorised and regulated by Parliament. In 1844 William Gladstone, President of the Board of Trade (i.e. the minister of commerce) proposed an integrated public system. This would have removed duplication, and it remained for decades on the statute books as an option. Statutory compensation was envisaged in terms of payback, i.e. 25 times the annual profits. British railways were eventually consolidated into four companies in 1923, and nationalized in 1945. London underground railways which began as a private ventures in the 1860s, were increasingly subsidized and municipalized, and were finally amalgamated with surface transport as a public system in 1933 (Barker and Robbins 1976). In the 1990s, free-market convictions required a return to private ownership but despite the government’s best

efforts this remains incomplete (McCartney and Stittle 2017). The track is in public ownership again, and investment in rolling stock is only partly private. The East Coast railway, one of the main long-distance passenger arteries, has now reverted three times into public ownership due to private failure. New lines (Crossrail, HS2) are being constructed by the government. In June 2018, ‘every single homegrown train operator is damaged goods’ (Lea 2018). Of the non-British ones several are owned by foreign governments.

The franchise applies in a broad range of economic and social activity: finance, network infrastructures, mass housing, defence and war, internal security and the legal system, social insurance, social and cultural infrastructure, and environmental protection, even the household and the family. That is still work in progress. In recent years there is a surge in social enterprise which seeks a profit in providing public and social goods (Nicholls et al. 2015). Our model suggests that this is only possible because the low interest rates since 2008 have made commercial finance available for longer break-evens. It is vulnerable to a rise in interest rates. A similar movement of ‘five-percent philanthropy’ for working-class housing in late-Victorian Britain came to grief on rising interest rates (Morris 2001).

Franchising allows the parties to trade favours. It is a potential source of corruption. A test of legality is not sufficient. Franchising, undertaken by agents of the sovereign, facilitates grand corruption, i.e. the legitimate kind. Towards the end of the 19<sup>th</sup> century a good deal of urban utilities came into public ownership in Europe in a movement known as ‘municipal socialism’. The motivations were various: a quest for universal provision at affordable prices, but also as a source of revenue. (Foreman-Peck and Millward 1994; Millward 2005). In 1906 a voluntary body in the United States, the National Civic Federation, sent a study commission to Britain. The commission published a three-volume report which compared public ownership in the two countries (National Civic Federation 1907). The commission rejected public ownership on several grounds. It had an innate bias in favour of private ownership, while conceding that in Britain public ownership worked well enough. American municipalities were too corrupt to be relied upon.

The biases of this commission are not easy to unravel. What they highlight is that franchising or any other form of public-private partnership requires integrity in order to be efficient, and that integrity is not always abundant. In the eighteenth century public office was seen as a legitimate source of private gain. During the second third of the nineteenth century the whole of north-western Europe, as well as the East Coast of North America, underwent an integrity revolution, a transition out of what in Britain was known as ‘old corruption’. These countries set out to create a body of impartial officials whose primary

purpose was the public good. Courts of law were also reformed. Impartiality was achieved by means of commitment devices: in Germany a meritocratic bureaucracy on the Weberian pattern; in the UK by expansion of democracy, appointment and promotion on merit, and an ethos of public service; in France by means of an elite corps of professional administrators and engineers (Neild, 2002). More than a century later this revolution began to unravel. From the 1980s onwards, the introduction of performance incentives for public servants undermined integrity and gave rise to conflicts of interest. The historian of the initial reforms wrote, 'I cannot think of another instance where a modern democracy has systematically undone the system by which uncorrupted public services were brought into being.' (Neild 2002, 198).

## VIII

### **Conclusion**

The UK led the way in Western Europe in the privatisation of a range of network utilities, culminating with the railways in the 1990s. The public good justification was microeconomic, namely the alignment of private incentives with public benefits (Florio 2004). Privatisation was accompanied by a large one-off increase in income and wealth inequality. In the absence of clear public benefits this may well be seen as the real objective of these reforms, which were also aligned with Conservative party ideology. Privatisation is also the international norm, recommended or imposed by the World Bank, the IMF, the EU, the G8, and most recently in the Trump infrastructure plan. Another justification is experience:

The weight of empirical evidence now strongly supports those who believe that private ownership is inherently more efficient than state ownership...this is true even for natural monopolies (Megginson 2005, 66).

But the evidence is mostly that privatised companies earn more profit. That is not compelling: the point of public enterprise is to serve the public, and not to maximise profit. Since privatised companies are typically franchises, all this tells us is that they are allowed to keep more at the expense of consumers and workers.

There is no prior presumption in theory that private enterprise will be more efficient, and theory also says nothing about how the gains will be distributed even assuming greater efficiency (Vickers and Yarrow, 1988). By now, there is a large literature which shows that economically and technically private enterprise has not been more efficient technologically or economically (Foreman-Peck and Millward 1994; Kondor 1994; Millward 2000a;

Florio,2004, 2013; Kwoka 1996; Iordanoglu 2001; IMF 2004; Jomo 2008; Barlow et al 2013; Bogart 2015; McCartney and Stittle 2017). But private enterprise is not less efficient either. This suggests that efficiency is not determined at the ownership level, but by technical staff and middle management, who face the same incentives in both types of enterprise.

Friedrich von Hayek famously argued that socialism was impossible because it required omniscience on the part of the central planner. In contrast, market systems emerge as a spontaneous order on the basis of local knowledge (Hayek 1945). But for long-term provision, the higgling of the market is not sufficient. The opposite is the case: certainty is required by commercial bankers, not by central planners. The task of social planning is to manage uncertainty. It needs to apply expert judgement to the pitfalls and opportunities of long-term projects, and to implement them with integrity and competence. Failure in one project is offset by success in another. The obsession of public authorities with clearing the ground for business has created perverse incentives. Private enterprise works best in the short-term, public management is required for the long term. The alternative is asking for trouble: corruption is endogenous to time horizons.

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