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Corruption Risks in UK Public Procurement and New Anti- Corruption Tools

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Executive summary

Public procurement is a major way in which public money is spent and public services provided. As such, it should be conducted with the utmost integrity and efficiency. Moreover, the rise of New Public Management theory which advocates bringing market forces into public service provision and the rapid growth of outsourcing have meant that public procurement today is undertaken by many different types of contracting authorities, attracts many different types of bidders, and covers a growing range of goods and services. The UK is at the forefront of a global trend which sees the relationship between the state and the private sector being transformed, with UK outsourcing spend having doubled under the 2010-15 government and the UK now the second-largest outsourcing market globally.

However, around the world, public procurement is an area that is vulnerable to corruption, with politicians and public officials using opportunities to manipulate the process to benefit themselves, their allies, or political parties. The UK must protect itself against the types of risk that arise from this ongoing transformation in the interface between the state and the private sector. To assist this process, this paper sets out to identify some key risk areas in UK public procurement and to make recommendations for reform and further research.

The UK government has taken a number of important steps to ensure that public procurement is conducted to the highest standards, and to make procurement markets more competitive. The work of the Crown Commercial Service has substantially professionalised public procurement while reforms to rules around open data have made the UK government one of the most transparent in the world. This paper does not seek to detract from those initiatives, but rather makes the case for reflecting on the changes underway and the interrelations among initiatives, furthermore for putting in place some new tools to ensure that open data best serves the interest of the society.

This paper shows how qualitative and quantitative methods can be used to analyse corruption risk. Assessing corruption risk qualitatively requires analysis of the nature of power held by public officials - and, in the case of local authorities, elected members - who preside over the public procurement processes (section two) as well as evaluation of the quality of the 'ecosystem' of accountability checks on their power (section three). This section discusses risks arising in the post-award governance of contracts, risks relating to lack of contracting expertise, and risks related to the 'revolving door', i.e., the movement of individuals between public- and private-sector roles.

Section three describes weaknesses in the accountability ecosystem. Several of these relate to deficiencies in the open data available for procurement, and in the inability to cross-check among different datasets. Other risks relate to weaknesses in accountability that arise from increased outsourcing and the difficulty of monitoring private providers of public services.

Section four elaborates a new quantitative methodology for assessing corruption risks specifically in public procurement. The methodology utilises 'Big Data' on public contracts to yield information about patterns and practices that may be indicative of corruption across a range of central and local institutions. It represents a highly innovative and effective technique for identifying irregularities which may be indicative of corruption in the procedures and outcomes of public procurement, and thus provides a basis for identifying systemic problems or investigating specific cases.



Section five builds on what we know about where the risks lie and the new indicators of corruption risks to put forward five main recommendations:

1. The UK should develop a public procurement data infrastructure which is of wide scope, high quality, and can be readily linked to relevant datasets. This will provide an objective basis for understanding how public procurement is currently conducted across different sectors and authorities, and ensure that all policy changes going forward are based on sound and detailed evidence.
2. The UK should introduce a set of user-friendly intuitive risk indicators to underpin government and civil society use of government contracting data. This is in line with the government's commitments under the Open Government Partnership, and is essential for building public trust in contracting authorities as well as facilitating scrutiny.
3. The UK should develop institutionalised channels through which stakeholders can become informed of key public procurement analytics and findings. This builds on recommendation two, but recognises that not all stakeholders are equally equipped to access and interpret data analytics. To ensure that maximum benefits are achieved from recommendations one and two, it is necessary to develop systematic ways for feeding results to a variety of stakeholders.
4. The UK should establish a dedicated Office for Public Procurement. This is of critical importance given the size and growth of public procurement in the UK. The Office would be independent of contracting authorities, to ensure that it was capable of performing advisory and monitoring roles without compromise. It would be responsible for the data collection and analytics outlined in recommendations one to three, as well as performing functions of policy initiator, watchdog and expertise pool.
5. The UK should establish a temporary commission on **'public** integrity at the interface between the state and the private **sector'** to research best practice in other countries, establish whether such practices are relevant for the UK context, and reform the rules and integrity infrastructure as necessary. The commission should have a wider membership of different stakeholders and draw on a range of international examples. This would help to ensure that the UK maintains its place as an international role model for public accountability.

1. Introduction

Public procurement is the process by which governments and public agencies spend public money on goods and services. When public officials corruptly subvert the correct process to award contracts not on the basis of quality or price but motivated by the promise of personal gain, the consequences may be costly and dangerous. Taxpayers get poor value for money, while corruption in procurement can also mean that infrastructure is built to poor safety standards or that services are delivered unfairly or to an inferior quality. Meanwhile, firms offering better value services may be pushed out of the market if they repeatedly fail to win contracts, hence undermining competition and economic growth in the longer term.

Public procurement plays a pivotal role in the UK economy, with estimates ranging from 5% to 14% of GDP in 2011, with the lower bound estimate considering only the announced government contracts in the Official Journal of the European Union (OJEU) (OECD, 2011), while the upper bound estimate uses the system of national accounts (European Commission, 2011; OECD, 2013). In the European context, the UK is one of the countries which spends most through public procurement, consistently above the EU average (see Table 1). Notably, only a fraction of this spending is advertised in the OJEU (Tenders Electronic Daily (TED), which allows for the highest degree of transparency and requires a highly structured data reporting format (Figure 1). The low rate of OJEU publication partly reflects factors such as the low value of some contracts and the use of sectoral exceptions (e.g., in defence and security), but our estimates also suggest that there is considerable non-reporting.

Local authorities account for the largest share of public-sector spending on goods and services, at 45% according to 2012-13 Cabinet Office data, with the NHS accounting for the second-largest share at 27%.¹ Central government procurement accounts for 21% of the total, of which almost one-half is spending by the Ministry of Defence.

¹ National Audit Office (2013), Managing government suppliers, Memorandum for Parliament HC 811 Session 2013-14, 12 November 2013.



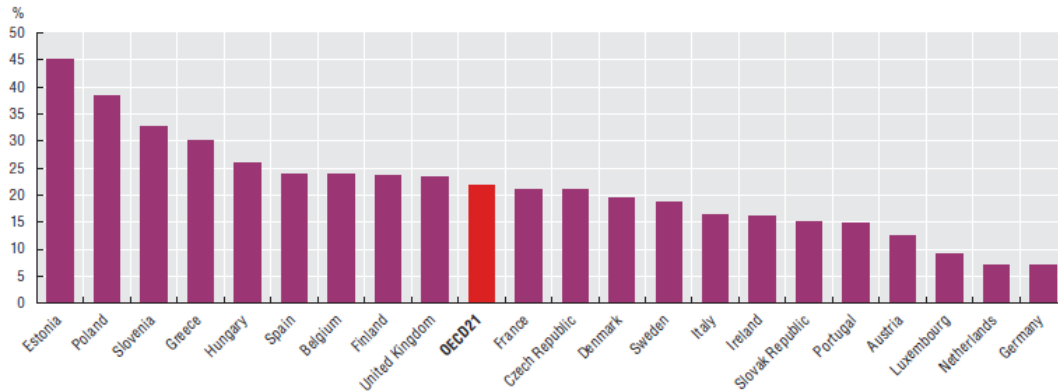
TABLE 1. ESTIMATE OF TOTAL PUBLIC PROCUREMENT EXPENDITURE BY GENERAL GOVERNMENT ON WORKS, GOODS AND SERVICES (EXCLUDING UTILITIES) AS % OF GDP

	year			
	2009	2010	2011	2012
Belgium	13.51	13.19	13.43	13.75
Bulgaria	12.80	12.18	11.06	10.85
Czech Republic	17.27	16.29	15.40	14.73
Denmark	13.92	13.72	13.47	14.06
Germany	14.93	14.68	14.46	14.45
Estonia	14.56	13.03	12.85	14.30
Ireland	12.49	11.92	10.36	9.67
Greece	13.64	11.59	9.85	9.77
Spain	13.39	12.94	11.83	10.18
France	14.91	14.87	14.52	14.74
Italy	11.37	10.90	10.61	10.33
Cyprus	9.76	9.53	8.91	7.42
Latvia	11.70	11.71	12.22	11.68
Lithuania	11.71	12.85	11.58	10.51
Luxembourg	13.07	12.78	12.18	12.34
Hungary	13.85	13.83	13.18	13.28
Malta	8.83	8.53	9.38	10.29
Netherlands	23.21	22.93	22.30	22.76
Austria	11.60	11.32	10.99	11.10
Poland	13.08	14.05	13.55	12.50
Portugal	12.95	13.79	11.89	10.68
Romania	13.44	12.64	12.98	12.00
Slovenia	13.33	13.48	12.64	12.40
Slovakia	12.95	12.74	12.43	11.81
Finland	16.84	16.66	16.66	17.20
Sweden	16.58	16.25	16.14	16.23
United Kingdom	16.15	15.43	14.34	14.46
EU average	14.70	14.38	13.86	13.74

Source: (European Commission, 2014, p. 7)



FIGURE 1. PUBLIC PROCUREMENT TENDERS ADVERTISED IN THE OFFICIAL JOURNAL OF THE EUROPEAN UNION AS A PERCENTAGE OF TOTAL NATIONAL PUBLIC PROCUREMENT SPENDING (2008)



Source: Eurostat.

StatLink <http://dx.doi.org/10.1787/888932391051>

Recognising the central role of public procurement for achieving public goals in the UK and the weaknesses of transparency in this area, this short review provides a brief overview of the conceptual frame which can be deployed to understand corruption in public procurement. It discusses the current state of play in terms of UK data and observed corruption risks, and it puts forward a set of evidence-based recommendations which would take the UK closer to international best practice in this field.

Public procurement often involves high-value and complex transactions that offer lucrative opportunities for corruption. Even for smaller contracts, this type of spending is typically highly vulnerable to corruption, favouritism and outright bribery. Moreover, it is difficult for those who lack knowledge and expertise in the contracting area to hold those involved accountable.²

The limited evidence available suggests that corruption is perceived to be a problem in UK public procurement, for example:

- A 2013 Eurobarometer survey of businesses found that 18% of UK companies that competed for public contracts said that they thought that corruption had prevented them from winning a contract in the previous three years, considerably better than the EU average of 32%, but nonetheless a high proportion.³
- Within public procurement, construction, which accounted for 45% of procurement in the UK in 2009-13⁴, is widely regarded as one of the most high-risk sectors for corruption, both globally and

² This is adapted from Ware, G., Moss, S., Campos, E. (2007) 'Corruption in Public Procurement: A Perennial Challenge' (2007) in Campos J.E, S. Pradhan (ed.) (2007) *The Many Faces of Corruption*, Washington DC, The International Bank of Reconstruction and Development / The World Bank www.igac.net/pdf/publications_adb_manyfacesofcorruption.

³ Eurobarometer (2014), *Businesses' Attitudes Towards Corruption in the EU*, Flash Eurobarometer 374, February 2014 (based on fieldwork conducted in February-March 2013) on an overall sample of 7,842 businesses. Available here: ec.europa.eu/public_opinion/flash/fl_374_sum_en.pdf. The data cited above can be found on p. 17.

⁴ Using OJEU (TED) data, share of spending on construction materials, construction works, and architectural services within to total public procurement spending.

in the UK.⁵ The Chartered Institute of Building's 2013 research on corruption in construction found that 38.5% of respondents thought that corruption was fairly common in the UK construction industry.⁶

However, these surveys are based on perceptions of corruption, a rather imperfect measure, albeit one that is widely used in the study of corruption because efforts to gather empirical evidence on corruption are hampered by the secrecy that surrounds corrupt acts and the fact that those who commit them often have the power to conceal their actions. It is difficult to judge whether cases that come to light are representative of wider patterns.

This paper measures corruption risks rather than levels, and uses both qualitative and quantitative methods to do so. For corruption to occur in public procurement, as in other areas of public administration, the individuals responsible for administering the procedure need 'discretionary power' and 'monopoly power' such that they can manipulate the process to their own ends. They are better able to exercise such power if inadequately checked by colleagues, superiors or other institutions.⁷ Assessing corruption risk qualitatively therefore requires analysis of the nature of power held by public officials - and, in the case of local authorities, elected members - who preside over PP processes (section two) as well as evaluation of the quality of the 'ecosystem' of accountability checks on their power (section three). Sections two and three are based on qualitative research into case studies where corruption has been revealed, as well as interviews with a range of stakeholders including government procurement practitioners, contractor companies, and officials in relevant accountability institutions, and on analysis of OJEU (TED) data for the UK between 2009 and 2013.

Section four elaborates a new quantitative methodology for assessing corruption risks specifically in public procurement. The methodology utilises 'Big Data' on public contracts to yield information about patterns and practices that may be indicative of corruption across a range of institutions. It represents a highly innovative and effective technique for identifying irregularities which may be indicative of corruption in the procedures and outcomes of public procurement, and thus provides a basis for identifying systemic problems or investigating specific cases (Fazekas & Tóth, 2014).

Section five builds on what we know about where the risks lie and the new indicators of corruption risk to ask whether the new methodology could be refined in order to develop anti-corruption tools tailored to UK public administration. The new methodology could be used to develop more sophisticated instruments for identifying different types of corruption risk in public procurement on an ongoing and real-time basis. Further, we propose a set of reforms needed to construct a healthy anti-corruption ecosystem of institutional checks on public contracting in the UK that would improve our ability to detect and prevent corruption in this important area of public spending.

⁵ Globally, the Transparency International Bribe Payers Index 2011 finds 'public works and construction contracts' to be the most corrupt sector.

⁶ Chartered Institute of Building. 2013. A report exploring corruption in the UK construction industry, September 2013. See <http://www.ciob.org/sites/default/files/CIOB%20research%20-%20Corruption%20in%20the%20UK%20Construction%20Industry%20September%202013.pdf>. Accessed 17 May 2015.

⁷ This theory is elaborated in Klitgaard, Robert (1991), *Controlling Corruption*, University of California Press: Berkeley.

2. Corruption Risks in Public Procurement in the UK

For the purposes of this review, corruption is understood broadly and is not restricted to bribery. In public procurement, political or high-level corruption seeks to steer the contract to the favoured bidder without detection, often recurrently and in an institutionalised fashion (Fazekas & Tóth, 2014; World Bank, 2009). This can be done in a number of ways, including avoiding competition (e.g., unjustified sole sourcing or direct contract awards), favouring a certain bidder by tailoring specifications, or sharing insider information. Such corruption may involve bribery and transfers of large cash amounts as kickbacks, but it is more typically conducted through broker firms, subcontracts, offshore companies, and bogus consultancy contracts. By implication, not everything designated as corruption in this review represents a criminal offence.

Corruption can occur at various stages of the public procurement process (OECD, 2009; Transparency International, 2006; Ware, Moss, Campos, & Noone, 2007). In the pre-tender phase, for example, corrupt officials in the contracting authority might seek to manipulate the procedure by falsely inflating needs, making excessive provision for errors with a view to benefiting in the post-award phase, or writing narrow specifications for the goods or services to be purchased, such that only one or very few suppliers can meet the terms. During the award phase, corruption might include failure to give adequate public notice (benefiting insiders), collusive bidding (private-private corruption), soliciting offers known to be inferior to a favoured supplier to give the appearance of competition, accepting late proposals or rejecting legitimate proposals, or making biased decisions at the evaluation stage.

These first two phases of procurement are relatively tightly regulated by the EU Directive on Public Procurement⁸, which determines the types of procedure that must be used for contracts of a certain value, sets out the number of quotes that must be solicited, and ensures the competitive nature of the process in other ways.⁹ These regulations apply to the whole of the UK public sector and create a strong framework for government procurement at local, devolved and central government levels, but only for contracts that are above the EU threshold for scrutiny¹⁰. For example, public works contracts above 5,186,000 EUR are subject to the EU Directive and must be published in the OJEU. Below these thresholds, different rules apply for contracting authorities in central government, Northern Ireland, Scotland, and Wales. Such smaller contracts are much less subject to scrutiny, although analysis using the new methodology described in this paper suggests that many of the highest corruption risks arise in smaller contracts. Moreover, the threshold itself creates an incentive for contracting authorities to avoid scrutiny by splitting up large contracts into several smaller pieces, each of which falls below the threshold.¹¹

Case study 1, while it relates to fraud rather than corruption, demonstrates how public officials in UK local government may exercise discretionary power to manipulate the procurement process for private gain.

⁸ http://ec.europa.eu/growth/single-market/public-procurement/rules/current/index_en.htm

⁹ The new directive governing public procurement 2014/24/EU which came into force in April 2014 contains a specific new requirement (Article 24) on contracting authorities to prevent, detect and avoid conflicts of interest. More information is available here: http://ec.europa.eu/internal_market/publicprocurement/index_en.htm

¹⁰ <http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1398241682308&uri=CELEX:32013R1336>

¹¹ See for example DG REGIO (EU Commission) conclusions on EU Funds audits: http://ec.europa.eu/regional_policy/en/conferences/integrity_pacts/presentations/ (presentation by Walter Deffaa). Details of UK procurement laws and policies can be found at <http://procurement.cabinetoffice.gov.uk/policy-capability/latest-policy-and-regulations/public-procurement-policy>.



Case study 1: Procurement fraud in the South East

In May 2012, Ross Knowles, head of energy procurement for the Local Authority South East Region, an organisation known as LASER which buys gas and electricity for Kent County Council (KCC) and 120 other local authorities, was convicted of fraud. Knowles had asked British Gas to add an extra charge of £0.04 per unit of energy to their contract as a “comfort blanket”, which would be reclaimed by KCC and LASER at the end of the year. This was said to be a ‘float’ balance to iron out any price fluctuations. Andrew Penhale, CPS Central Fraud Group said, “At the year-end reconciliation, instead of claiming a rebate which would have benefited all the public services that were part of the consortium, he forged invoices and diverted the monies to his own bank account.” Knowles received a personal gain of around £400,000.¹²

Research suggests that the third phase of the procurement process, post-award contract implementation – in which the winning bidder must provide the agreed goods and services according to the conditions agreed in the contract and the contracting authority should monitor the fulfilment of the contract - is typically less tightly controlled. Corruption can arise if favoured sub-contractors are not held accountable, the use of sub-standard goods is overlooked, or if a company and a corrupt official collude to agree on price increases or changes in specifications (Coviello & Gagliarducci, 2010).

One key weakness in the governance of this area relates to a lack of expertise in post-award contract monitoring. At central government level, the Crown Commercial Service plays an important role in supervising and assisting with contracting up to the award phase, but similar expertise is not typically available once the contract is awarded. Similarly, at the local government level, the contract implementation phase is often managed by the local authority department which uses the procured goods or services, rather than by the central procurement function. This department may be unaware of the precise terms of the contract and may not notice if corners are cut. According to one procurement expert in UK local government interviewed for research,

“There might be a disconnect between a procurement department that does this first part [pre-tender and tender] and the ‘client’, e.g., the IT dept. It is the IT department that is supposed to monitor the contract, and see how it is performing, but the disconnect reduces accountability. The supplier might be able to provide sweeteners to the IT department to re-negotiate the contract without going back through procurement department.”

It is important for procurement teams to maintain a monitoring role over contracts post award.

Problems in the contract implementation phase are rife in public procurement globally, and have been documented particularly in the case of large infrastructure procurement. Thus, Guasch & Straub (2009) analyses infrastructure concessions in Chile over a 25-year period and finds that contracts are frequently re-negotiated within very short periods after the initial contract award, almost always leading to an increase in costs for contracting authorities and/or a reduction in the investment requirements for winning bidders.

Flyvbjerg & Molloy (2011) focus on estimates of costs and demand associated with major infrastructure projects. In their research spanning 258 projects in 20 countries over five continents, they find that nine out of ten projects have a significant cost over-run (averaging 44.7% in the case of rail projects) and that our ability to forecast costs has not improved over a 70-year period. In another

¹² Kent Online, ‘Energy boss Ross Knowles jailed for seven years for fraud’, 3 May 2012. http://www.kentonline.co.uk/kentonline/home/2012/may/3/council_boss_ross_knowles_jail.aspx

piece of research on forecasts for demand for infrastructure projects over a 30-year period, they find that benefits are consistently over-estimated and yet costs are under-estimated.

Many of these errors are likely to be explained by incompetence, inefficiency, or the cognitive bias associated with the ‘planning fallacy’, (Kahneman and Tversky 1979). However, Flyvbjerg and Molloy suggest that the extent of mis-forecasting and lack of improvement over time suggests that some political and commercial actors may also engage in “strategic deception”. They argue that,

“the practice of deliberate, strategic misrepresentation of costs and benefits comes into focus as a form of corruption alongside bid-rigging and collusion.”

Strategic deception might be used by public officials or elected members with discretionary power over the PP process, or by planners and developers, to manipulate tender processes for their own private gain. For companies, such private gains may come in the form of contracts or, for individual employees, as bonuses or kickbacks. For officials and elected members, benefits might include bribes but could well be non-monetary gains such as career promotion or status benefits deriving from an enhanced budget or from being associated with a flagship project.

Research suggests that contractors often make their profit by bidding low and then negotiating variations – including increases in the price or the use of cheaper inputs - across the life of the project:

“...the number of variations – that’s where people make money. The profit is often determined by the award of work under the framework contracts, particularly where the pricing basis is not clearly defined, so that, e.g., you can end up with charging for extra work by hourly rates.” [Interview with contractor]

There is a risk that the contracting authority’s procurement team could collude in such a strategy, perhaps particularly if this function is outsourced. In central government procurement, this risk has been addressed at least for the 40 strategic suppliers, since the Cabinet Office is now required to approve new contracts, extensions and major changes to contracts with these suppliers. Outstanding risks pertain largely to smaller suppliers, who may nevertheless still be bidding for large contracts. In local government, contract re-negotiations should also be subject to internal scrutiny and approvals, but procedures have been overlooked in a number of cases associated with corruption (e.g., see Case Study 2).

Many contracting authorities may be inadequately resourced to guard against strategic deception by other parties, because of weaknesses in in-house contracting expertise. At central government level, this problem is mitigated by the existence of the Crown Commercial Service. However, research suggests there is great variation in the degree of contracting expertise available across UK local authorities. Another procurement expert argued that relatively few resources are devoted to contract management:

“The central functions in local authorities often focus on contract letting and not contract management. Many of the same skills are involved, but less resources are devoted to contract management. And departments are often left to manage contracts – raising risks not just of corruption but also of inefficiency.”

To an extent, this problem may be addressed where authorities pool resources in joint procurement functions. However, the efficiency and accountability of such arrangements remains largely unresearched. One local government professional interviewed for this research took the view that the pooling of the procurement function brings efficiency gains only where the goods being procured are relatively standardised commodities. For the procurement of services, any efficiency gains are likely to be offset by efficiency losses owing to a lack of understanding of local needs and markets.



Moreover, where in-house expertise is weak, contract-drafters are likely to be at a disadvantage compared to private lawyers hired by commercial contractors. One construction-sector executive noted,

“The sharp operator in terms of the outsourcing contractor company will have agreed a contract based on a lump sum, invariably based on a local authority which, at the time that the contract was let, was much larger. If you have a company which provides HR, IT and admin, where can it make its savings? If they are prepared to make the investment, they can usually make significant savings for themselves, *that’s* where they are legitimately making some of their profit, but if the local authority has downsized over the years, then there is less to provide. So if it’s a 20-year contract, every 5 years there is a review and renegotiation based around head count. But normally councils are not very good at negotiating soft-side *deliverables*.”

Local authorities are particularly at risk here, since contracting expertise is highly varied, whereas central government units can draw on the expertise of the CCS. Local authorities are frequently involved in high-value complex long-term procurements, where monitoring is inherently difficult and likely to involve many discretionary judgements on the part of officers and members. High staff turnover and a lack of project management expertise also lead to weaknesses in personal responsibility and accountability for major projects. **A lack of control over major projects can lead to cost overruns and delays, but can also mean that it is difficult to detect instances of corruption.** Some authorities clearly struggle to manage such large-scale contracts, as Case Study 2 demonstrates.

Case Study 2: Wirral Council – Highways and Engineering Services contract

In June 2012, a Public Interest Report by the Audit Commission on Wirral Council's letting of a contract for the provision of highway and engineering services raised concerns about conflicts of interest and weak governance in the procurement process. The successful contractor had quoted and confirmed rates for some elements of electrical work for street lighting and traffic signs that were only 2% of the average of the other contractors' estimates. Following a dispute over rates to a subcontractor, the council paid out an additional £640k and agreed a contract variation with a further cost increase of £855k. Even with the additional £1.495m, the overall cost was below that of the next lowest bidder. Although corruption was not proven, the Audit Commission found considerable evidence of conflicts of interest and governance failures, including that:

- The director of technical services failed for some time to declare his relationship with the contractor's representative while the declaration of interest that was eventually made was incomplete and inconsistent with other evidence.
- The required approval for contract variations from the relevant cabinet member or committee had not been obtained, and the interim director had ignored explicit advice from Internal Audit to report the largest variation to elected members.
- Internal Audit had rated the level of assurance for the contract as 3-star (good) despite identifying a number of high-priority risks and recommendations in key areas of the contract management and monitoring systems.
- The council's response to an anonymous whistleblower regarding a significant claim against the council by the contractor was inadequate.

At the local level, individual members or groups of members can, in certain conditions, accumulate substantial formal and informal powers, such that officers and fellow councillors become reluctant to challenge them. The Committee on Standards in Public Life has commented that,

*"Past history suggests that problems are most likely in areas with monolithic political cultures and correspondingly little political challenge, where partisan rivalry is most bitter and tit for tat accusations most common, or in those predominantly rural areas with significant numbers of independent members without the benefit of party discipline."*¹³

Local authorities across the UK exhibit a variety of different governance structures, with different concentrations of political power. However, in some circumstances, council leaders in particular have considerable patronage power, able to appoint members of their cabinet and award chairmanships of committees. These roles bring financial gain for the recipients in the form of 'special responsibility allowances' and thus may lead to situations where councillors are unwilling to challenge a leader because they fear losing one of these roles or feel obliged to provide informal favours, such as offering information or 'turning a blind eye' to misconduct.

Moreover, some individual cases reported in the press suggest that there may be a higher prevalence of governance irregularities in local authorities where there is a considerable

¹³ Committee on Standards in Public Life. 2013. 'Standards matter: A review of best practice in promoting good behaviour in public life', January 2013, CSPL Fourteenth Report, Cm 8519.

concentration of political power over time, because one party dominates the council or because a high proportion of seats are uncontested at elections. In Glasgow, in 2010, allegations of corruption were made against former leader of the city council, Steven Purcell, in connection with council contracts awarded to a quasi-public entity run by Purcell's friend. According to the allegations, the company then used subcontractors which in turn made donations to Purcell's political party. However, after a two-year investigation by Strathclyde Police's major crime unit, police stated that there was insufficient evidence of criminality and no further action was taken. Case study 3, which also relates to a council dominated by one party, suggests that serious breaches of procedure can occur relating to the procurement of major works, and highlight the critical role of external auditors in identifying and investigating such irregularities.

Case Study 3: Newham Sixth Form Centre and Campus Project

In the London Borough of Newham, another council dominated by one party for many years, a January 2015 Public Interest Report recently revealed major irregularities over projects to build a new Sixth Form Centre, extend the Town Hall and improve the Council Chamber. The auditors found numerous irregularities, including that:

- The project Board failed to obtain cost reports or revised contracts from contractors, and this failure was not communicated to the Section 151 Officer.
- Members were not consulted on changes to the scope of the project or asked to authorise increases in funding, despite some of them being in excess of £550k.
- £10.3mn of additional work was awarded to one contractor without following procurement rules and without the approval of elected members.

The practice of outsourcing, by both central and local government, is becoming much more common, with the UK outsourcing market now the second-largest in the world. Government spending on outsourcing more than doubled under the 2010-15 government, from £64bn to £120bn, while the number of outsourced contracts rose to 1,185 over the period, up from 526 under the previous government.¹⁴ Sometimes the new suppliers of services hire former government employees to carry out the task. This makes sense, in that the expertise about how to provide a service in a certain locality is maintained and there is greater continuity in service provision, which should benefit residents. However, this '**revolving door**' also creates a risk that civil servants – or, in the case of local authorities, elected members - might abuse their access to insider information or their ability to shape policy or contracts whilst in office, in order to create opportunities for themselves, their friends, or for private-sector companies with which they will later seek employment (Dávid-Barrett, 2011).

Research suggests that corruption involving conflicts of interest resulting from the revolving door is difficult to prove, but may not be uncommon. One contractor took the view that,

*"There are situations where local authority staff end up working for contractors and implicit agreements to scratch backs in return for contracts will **arise**."*

Inducements might involve the offer of bribes or favours, or the promise of future employment or kickbacks from contracts. Dávid-Barrett (2013) cites one case where a council officer had written the

¹⁴ Data from Information Services Group quoted in the Financial Times, 30 April 2015, <http://www.ft.com/cms/s/0/244f0bd8-eccb-11e4-a81a-00144feab7de.html?siteedition=uk#axzz3cYrqSvRJ>. The figures exclude wholesale privatisations such as probation services.

specification for a tender for a particular contract, resigned from the council, and then successfully bid for the contract as a private-sector supplier. It is difficult to identify or prove corruption in such cases, yet even the appearance of impropriety can be very damaging to public trust in government.

3. The transparency and accountability framework

3.1 Inadequacies of open data infrastructure

The 2010-15 government set great store in the potential for 'open data' to improve accountability over various aspects of government, public procurement included. Upon taking office in May 2010, Prime Minister David Cameron wrote to government departments asking them to publish certain datasets on a single website free of charge.¹⁵ In the case of central government data, departments were required to publish:¹⁶

- online historic COINS spending data (from June 2010);
- all new central government ICT contracts (from July 2010);
- all new central government tender documents for contracts over £10,000;
- new items of central government spending over £25,000 (from November 2010);
- all new central government contracts (from January 2011); and
- full information on all Department for International Development (DFID) projects over £500 (from January 2011).

For local authorities in England, rules about the publication of spending data are set out in the unified Local Government Transparency Code, which guides councils on what data they should publish and how. The Code requires local authorities to disclose as much information as possible, including:

- all expenditure over £500;
- all invitations to tender and contracts with a value over £500;
- annual data in relation to senior employee salaries, grants, local authority land; and
- organisation charts and pay multiples.

However, there is great variation in the quality of data that is published, and no procedure for sanctioning non-compliance.

The most comprehensive portal for accessing public procurement data is Contracts Finder¹⁷ where contracts above 10,000 GBP awarded by contracting entities are published. While the threshold for

¹⁵ Data can be found at <http://gps.cabinetoffice.gov.uk/about-government-procurement-service/transparency-and-accountability>, including details of all Government Procurement Card transactions over £500 and all other financial transactions over £25,000 made by the Government Procurement Service, as well as information on all contracts over £10,000. The UK Government produces quarterly reports on procurement and contracting transparency, which can be found at <https://www.gov.uk/government/organisations/cabinet-office/series/procurement-and-contracting-transparency-progress-reports>.

¹⁶ These requirements were not enshrined in law, despite the letter initially being characterised as a temporary policy document. The letter stated that, "In advance of introducing any necessary legislation to effect our Right to Data proposals, public requests to departments for the release of government datasets should be handled in line with the principles underpinning those proposals: a presumption in favour of transparency, with all published data licensed for free reuse."

¹⁷ www.contractsfinder.service.gov.uk

publishing data is low compared to much of the EU, the scope of information disclosed is very limited (see Annex A).¹⁸

The current data infrastructure in the UK faces three fundamental challenges. First, various government open data sources are disconnected, hindering cross-validation. Among these, the most notable is spending data,¹⁹ which lacks any actual or re-constructible link to contracts. The new World Bank public procurement tracking system currently being piloted in a few countries explicitly links contracts to invoices, disallowing any payment without a valid link to a contract. This straightforward check on spending is not currently undertaken in any systematic way in the UK. It is similarly problematic that company registers - and equivalent information for public sector organisations - are not linked to public procurement data. In this case, the links can be re-constructed using textual information such as organisations' names and addresses. In some national public procurement systems such as that of Croatia²⁰, organisation IDs are automatically included in public procurement announcements, allowing the data to be queried easily for information relevant for both governments and society, e.g., tracking organisational performance over time or investigating causes for municipal budget deficits.

Second, and closely related, is the lack of systematic knowledge about the validity of the information in public procurement announcements. There are no automatic and systematic checks on whether even basic information in notices reflects reality, for example whether the contract value announced on Contractsfinder is the same as the contract value in the contract signed by parties. Slovakia has taken a radical approach to this data validity problem by prescribing that public procurement contracts are only binding on parties if a correct announcement has been published on the central government website (Šípoš, Samuek, & Martin, 2015). In addition, the full contracts signed by the parties are also deposited on a central website so that anyone can readily check data validity and investigate further details of government spending in addition to official data published in procurement announcements.

Third, a very basic indicator of data quality currently produced by UK contracting entities is whether they disclose all those pieces of information which are mandatory. If mandatory information is missing, the capacity of government to control spending and of society to hold governments accountable is certainly curtailed. Hence, the high frequency of empty fields in supposedly mandatory contract award announcements published in the OJEU by UK procuring entities provides a further indicator of the poor quality of UK public procurement data (Table 2).

¹⁸ In addition, Contracts Finder has operated as a beta version since 26th February 2015, while the previous publication site (<https://online.contractsfinder.businesslink.gov.uk/>) ceased to publish new notices which creates a potential temporary weakening of public procurement transparency, whose exact scope is to be assessed.

¹⁹ <http://data.gov.uk/data/openspending-report/index>

²⁰ <http://www.integrityobservers.eu/default2.aspx>



TABLE 2. LIST OF FIELDS OR KEY PIECES OF INFORMATION TRACKED FOR CALCULATING DATA QUALITY OF OJEU (TED)²¹

procuring body address

winner name

winner address

winner town

winner post code

winner country

contract signature date

nuts-3 code of contract performance

including EU funds or not

number of bids received

type of assessment criteria used

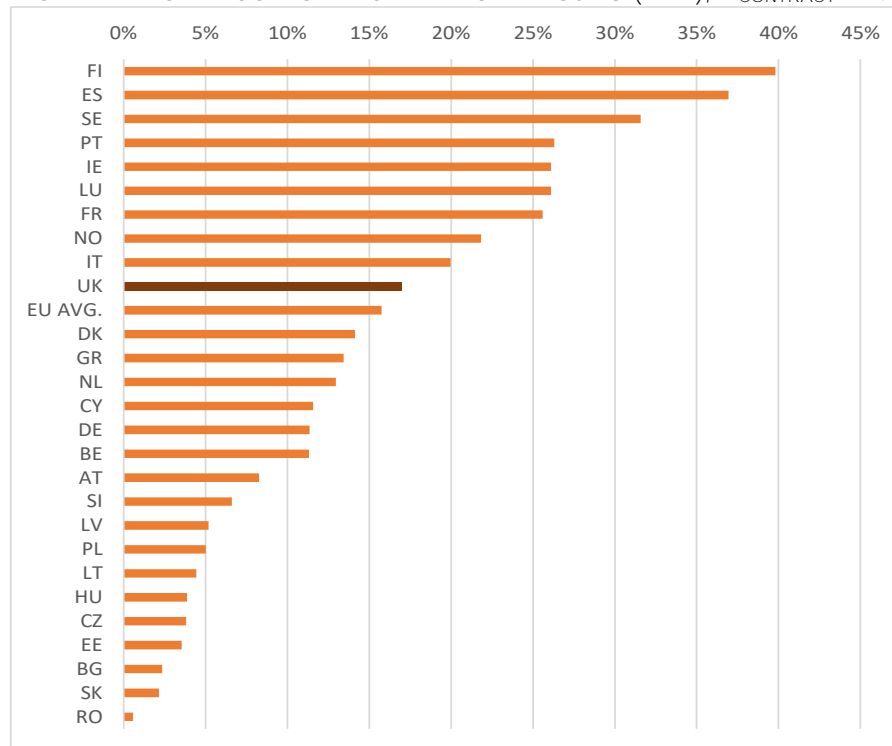
contract value

using subcontracts or not

The average error rate or the quality of data reported varies drastically across the EU with the UK slightly underperforming relative to the EU average and drastically underperforming compared to Central and Eastern European EU Member States such as Romania or Slovakia (Figure 2). Among the most common missing fields in the UK (central as well as local) is contract value: in 43% of the awarded contracts, there is no information given on the value of the contract. The lack of such an essential piece of information hinders any systematic analysis while also preventing taxpayers from accessing even basic data, e.g., concerning which companies are the largest suppliers to the UK government.

²¹ <http://ted.europa.eu/TED/>

FIGURE 2. AVERAGE RATE OF MISSING INFORMATION IN OJEU (TED), $N_{\text{CONTRACT}}=1.403,939$



Source: (European Commission-DG Internal Market and Services, 2015)

While it is not part of the 13 mandatory fields monitored above²², the publication of a call for tenders prior to a contract award is a further crucial element of a transparent and well-functioning public procurement system (Coviello & Mariniello, 2014). In the UK, in open procedures where publication of a prior call for tenders is mandatory, only 67% of contract award announcements have a linked call for tenders.²³ As a published call for tenders is a critical document for bidding or potentially bidding companies, the neglect of its publication is likely to have a detrimental impact on bidder participation, hence prices, value for money, and corruption risks.

3.2 Audit arrangements

Public procurement, like other procedures within the public administration, is monitored by an internal audit team which can check compliance with procedures and, if necessary, call in particular tenders for closer scrutiny or recommend re-tendering. However, pressure on public-sector budgets at all levels of government in the UK has meant that internal audit teams have been hit by spending cuts. Many local authorities in particular have chosen to cut such back-office functions rather than frontline services. Internal audit remains a requirement for all local authorities, but the quality of audit may be compromised by spending cuts in this area.

At central government level, the Crown Commercial Service has introduced a Mystery Shopper function, which means that companies which have found irregularities in the procurement process

²² It is not part of the 13 items because it is not always mandatory.

²³ It is also possible that the call for tenders has been published in some of these cases, but the link to the contract award announcement hasn't been entered making the establishment of such a link impossible.

have a mechanism for raising concerns. The CCS then takes responsibility for investigating and rectifying any problems. A similar mechanism at local level has also helped to improve accountability, while voters can report concerns about governance irregularities to the local authority's external auditor to request an investigation. Auditors are also required to provide an opinion on the local authority's use of resources. The Mystery Shopper mechanism has proved to be an important part of the accountability architecture, and many of the issues raised relate to potential corruption risks, e.g., the January-March reports at central government level included complaints that tenders favoured certain suppliers, that tender announcements had short deadlines, and that tender specifications were overly specific and hence favoured a sole supplier.

When services are outsourced, local authorities retain a statutory obligation to ensure that all of the rules that would have applied to them are equally followed by the external providers, but the extent to which that obligation is fulfilled varies. Moreover, councils sometimes seek to claim that decisions made by contractors on long-term contracts are beyond their control. Without the Audit Commission to exert pressure and with the decline of local investigative journalism, there is a risk that corruption in this area will become more common. The Institute for Government's 2012 report, *Commissioning for Success*, argues that decisions about when to outsource need to be made on a more robust basis, that monitoring and stewardship of outsourced services needs to be strengthened, and that accountability arrangements need to be clarified.²⁴

In theory, competition should exert discipline on companies to perform and should facilitate accountability, because competitors have an incentive to scrutinize the fairness of procurement processes and the performance of their competitors. However, the domination of the outsourcing market in the UK by a few very large firms - G4S, Capita, Serco, Carillion, Babcock and Mitie - has led some to question whether these companies are subject to sufficient competitive pressure.²⁵ The Institute for Government has recommended that government seek to address the problem of weak competition in certain procurement markets by conducting a market study and/or seeking independent advice from the Competition and Markets Authority (Gash et al 2012). In some areas and for particular contracts, the level of competition is severely limited. The Cabinet Office's work to improve competition and facilitate access for smaller suppliers has been helpful and should be continued.

The Crown Commercial Service has also taken important steps to improve monitoring of the performance of 40 'strategic suppliers'. However, accountability in this area – and particularly the potential for external stakeholders to monitor contracts - remains inhibited by weaknesses in transparency. At present, commercial confidentiality inhibits scrutiny of the work of private providers of public services, particularly given that efforts to extend freedom of information rights to these contracts are stalled.²⁶ Transparency requirements may also need to be tailored to specific sectors. There may be good reasons for limiting transparency in a few areas, but these should not be allowed to determine the standard across the range of government procurement.

The abolition of the Standards Boards and Standards for England means that formal requirements on elected members are limited to registering interests. Even in this area, there is

²⁴ Blatchford, Kate and Tom Gash, 'Commissioning for success: how to avoid the pitfalls of open public services', Institute for Government, 2012.

²⁵ Social Enterprise UK, *The Shadow State*, 2012; available here: http://www.socialenterprise.org.uk/uploads/files/2012/12/the_shadow_state_3_dec1.pdf

²⁶ The Transparency and Accountability Bill, introduced to parliament in the 2014-15 session, provided for the possibility of including subcontractors under FOI obligations, but it is currently stalled.

very little monitoring or action taken in the case of breaches. Codes of conduct are no longer standardised. Civil Servants are required to disclose any potential conflicts of interest to the department in which they serve, but these disclosures are not published.

Greater transparency over public spending paradoxically brings the risk of new types of fraud by **'armchair fraudsters'** or organised criminal groups. For example, the publication of supplier invoices by local authorities led to a wave of fraudulent requests whereby offenders pretended to represent a supplier and asked local authorities to change the details of the bank account into payments were made. Fortunately, the National Anti-Fraud Network (NAFN), which acts as a hub for the collection, collation and circulation of intelligence alerts on fraud against Local Authorities, identified this fraud relatively quickly. Such intelligence sharing is vital to countering fraud and organised crime, but it requires considerable investment in resources. Greater research is needed to understand how organised crime groups infiltrate legal procurement markets and how best this can be curbed.

4. A new methodology for detecting corruption risks in public procurement

The 2011 National Fraud Authority report recommended greater preventive work, centralisation and transparency, as well as a holistic risk management approach and data analytics to detect anomalous behaviour. In this section, we elaborate on a set of tools tested in other contexts which might be used for detecting corruption risks in public procurement in the UK. In some cases, we have been able to provide preliminary analytics on the UK case.

The provision of higher quality, more extensive public procurement data can benefit society in a number of ways, such as improved control of public spending, more efficient bidding markets, and more targeted audits. 'Big Data' analytics in public procurement has the capacity to complement traditional audit and investigation by identifying high-risk transactions and delivering the data from which audit and investigation process can start (e.g., the names of companies involved, individuals, and a list of high-risk contracts). The discussion below considers several analytical options which

- are of particular relevance from an anti-corruption perspective;
- require data that is readily available or could be relatively easily collected in the UK; and
- have been evidenced to be effective.

4.1 Transparency

The transparency of the entire public procurement process from pre-bidding through bid evaluation to contract implementation is crucial for the fight against corruption. If monitoring occurs only in one phase, it will most likely only displace corruption rather than reduce it.

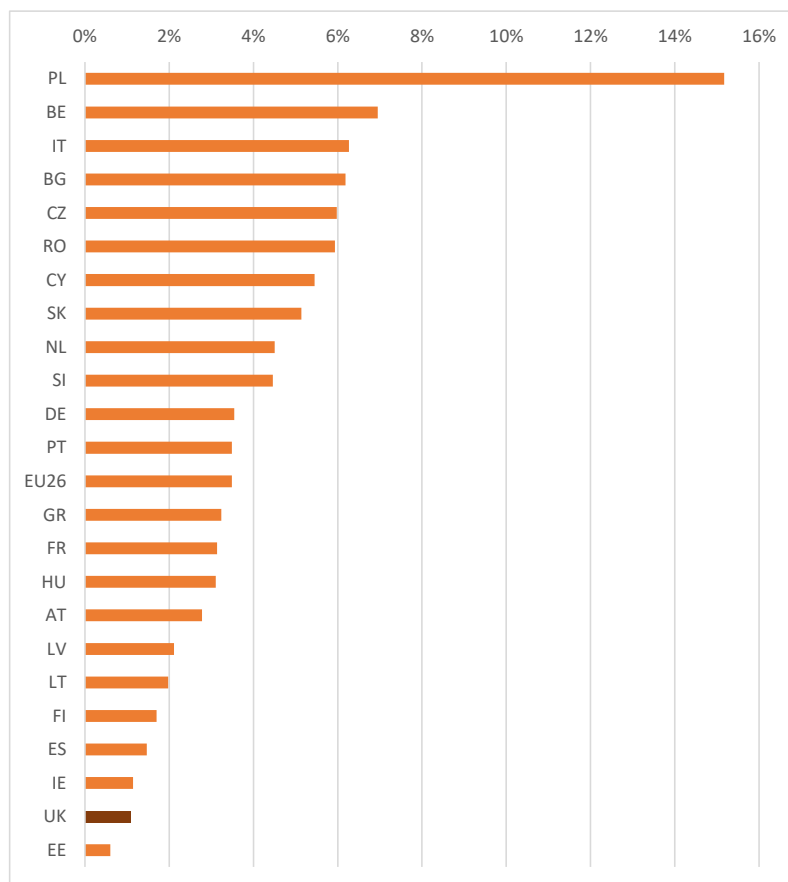
Among the different aspects of public procurement transparency, the publication of the call for tenders has received the most extensive scholarly attention as it is a crucial document for bidding and potentially bidding companies (OECD, 2007). Scholars find that complete failure to publish calls for tender leads to increased prices in Italy (Coviello & Mariniello, 2014), while frequent changes in the tendering documents during the bidding phase increases corruption risks in Central and Eastern



Europe (Fazekas, Chvalkovská, Skuhrovec, Tóth, & King, 2014). All across Europe, avoiding the publication of the call for tenders in the OJEU, whether for purely administrative or corrupt reasons, is associated with lower price discounts.²⁷ According to the latter finding, in the UK, the failure to publish a call for tenders could result in foregoing a 1% price discount (

Figure 3). Given that the UK spends 5-14% of its GDP on public procurement, even such a small fraction of potential savings could translate into large absolute saving values of the order of billions of pounds a year.

FIGURE 3. POTENTIAL AMOUNT OF FOREGONE PRICE DISCOUNTS IN TENDERS WITHOUT A PUBLISHED CALL FOR TENDERS IN THE OJEU (TED) ON PRICE DISCOUNTS, 2009-2013, $N_{\text{CONTRACT}}=173,698$



Source: own calculations using European Commission-DG Internal Market and Services (2015)

Notes: Bars represent the country-specific regression coefficients in a multilevel regression explaining relative contract value (originally estimated price/awarded contract value) while controlling for contract value, sector of the contracting body, type of the contracting body, year of contract award, and main market of contract.

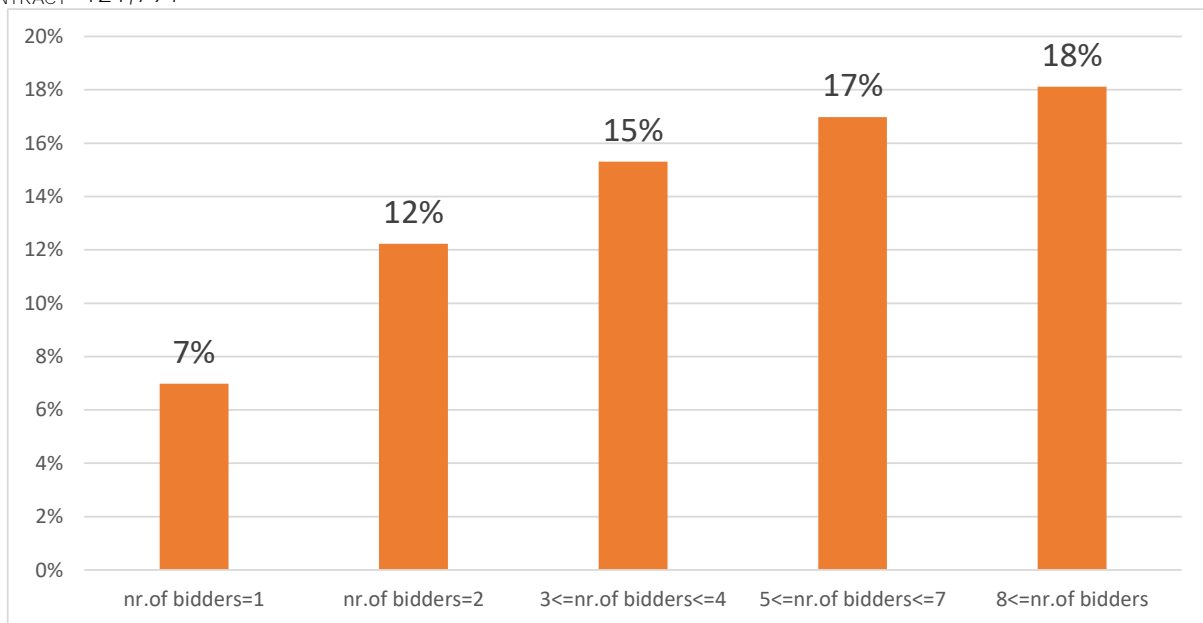
²⁷ Price discounts are calculated using the following formula: $1 - (\text{originally estimated price/awarded contract value})$



4.2 Prices and competition

Research from a handful of countries points out that one of the principal ways that transparency in the bidding process results in price savings is through the number and composition of bidders such as the frequency of non-local bidders (Lewis-Faupel, Neggers, Olken, & Pande, 2014). This is a picture largely consistent with public procurement data from Europe (Figure 4).

FIGURE 4. PRICE SAVINGS ASSOCIATED WITH NUMBER OF BIDS SUBMITTED, EU26²⁸, 2009-2013, $N_{CONTRACT}=121,794$



Source: own calculations using European Commission-DG Internal Market and Services (2015)

Notes: Bars represent the regression coefficients in a linear regression explaining relative contract value (originally estimated price/awarded contract value) while controlling for contract value, country of contracting body, sector of the contracting body, type of the contracting body, year of contract award, and main market of contract.

With the UK awarding only a fraction of its high value contracts without any competition, the potential loss to the budget is moderate (Table 3). However, given that the numbers below refer to contracts awarded on otherwise competitive markets, there is clearly room for improvement for some British contracting entities.

TABLE 3. DISTRIBUTION OF CONTRACTS AWARDED IN THE UK ACCORDING TO THE NUMBER OF BIDS RECEIVED, 2009-2013

Number of bids submitted	Freq.	Percent
1	3,672	3.38
2	5,559	5.12
3-4	15,130	13.94
5-7	18,990	17.49
8+	65,216	60.07
Total	108,567	100

Source: own calculations using European Commission-DG Internal Market and Services (2015)

²⁸ EU28 except for Malta and Croatia, two countries which do not have enough contracts awarded to be included in the sample.

4.3 Risks of corruption and collusion

To identify the corruption risks outlined in section two, a complex indicator is needed which can capture characteristics of the tendering process that are in the hands of the public officials who conduct the tender and that might suggest deliberate restriction of competition (for full discussion of red flags used see: Charron, Dahlström, Fazekas, & Lapuente, 2015; Fazekas, Tóth, & King, 2013). A key indicator of corruption risks is the presence of single-bidder contracts awarded on otherwise competitive markets, which may indicate that market access has been deliberately restricted²⁹. In addition to single bidding, the following process-related indicators of corruption risks are used which further reinforce the suspicion that competition restriction was deliberate rather than accidental:

- i) A simple way to fix tenders is to avoid the publication of the call for tenders in the official public procurement journal as this would make it harder for competitors to prepare a bid. This is only considered in non-open procedures as in open procedures publication is mandatory.
- ii) While open competition is relatively hard to avoid in some tendering procedure types such as open tender, others such as invitation tenders are by default much less competitive; hence using less open and transparent procedure types can indicate the deliberate limitation of competition, hence corruption risks.
- iii) If the advertisement period, i.e. the number of days between advertising a tender and the submission deadline, is too short for preparing an adequate bid, it can serve corrupt purposes; whereby the issuer informally tells the well-connected company about the opportunity well ahead.
- iv) Different types of evaluation criteria are prone to fiddling to different degrees, subjective, hard-to-quantify criteria often accompany rigged assessment procedures as it creates room for discretion and limits accountability mechanisms.
- v) If the time used for deciding on the submitted bids is excessively short or lengthened by legal challenge, it can also signal corruption risks. Snap decisions may reflect premeditated assessment, while legal challenge and the corresponding long decision period suggests outright violation of laws.

Each of these are large and significant predictors of single-bidder contract awards when controlling for the sector of the contracting entity (e.g. education, health), type of contracting entity (e.g. municipality, central government), year of contract award, main product market of procured goods and services (e.g. roads, training) and contract value. A set of further 'red flags' have been identified to relate to corruption risks on national data in Central and Eastern Europe such as convoluted eligibility criteria suggesting the tailoring of the criteria to fit a single company. Ongoing work implements these additional indicators in UK public procurement data.

A composite indicator, the Corruption Risk Index, is constructed to incorporate the average incidence of single bids received and the five process-related 'red flags'. The Corruption Risk Index varies between 0 and 1, where 0=minimum corruption risk and 1=maximum corruption risk. The validity of

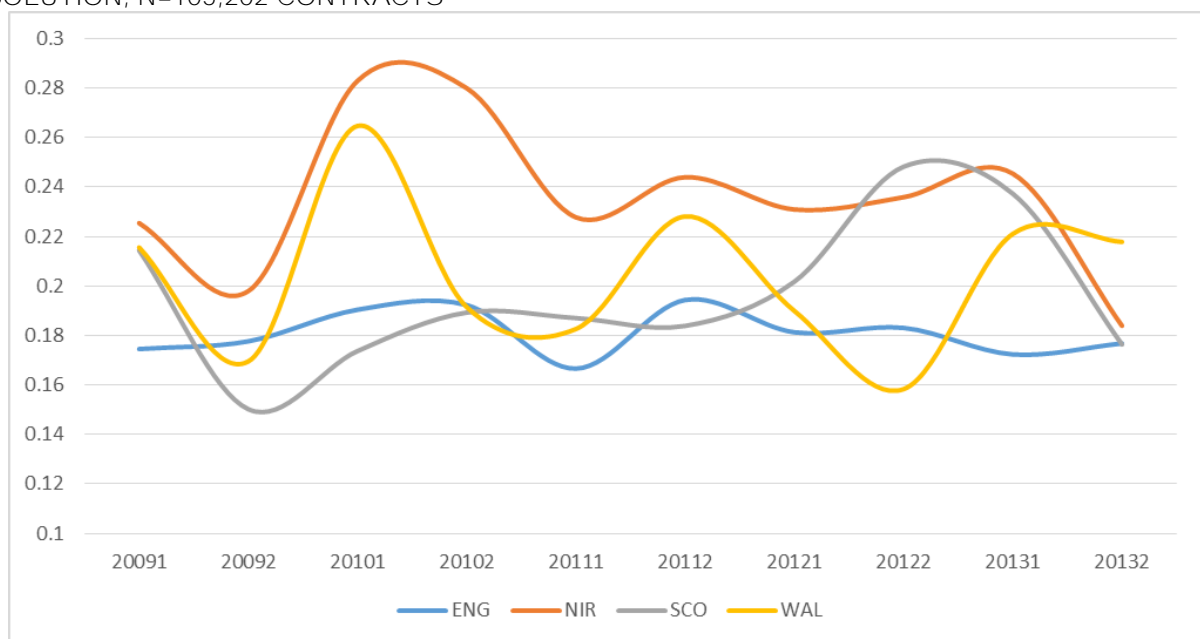
²⁹ The quantitative corruption risk methodology is only applied to competitive markets where the lack of competition is the result of the tendering process characteristics rather than technology or the underlying market structure. This is not to say that on the more specific markets there is no corruption, rather, those markets are better approached with qualitative than quantitative methods.



Corruption Risk Index as a measure of corruption risks has been demonstrated in a pan-European context as well as for Central and Eastern Europe (Charron et al., 2015; Fazekas et al., 2014).

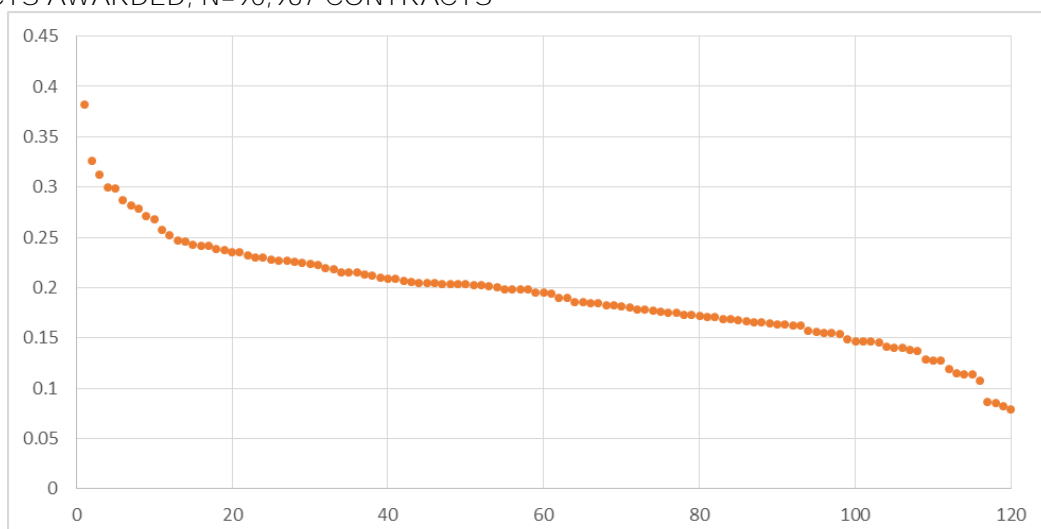
Such a composite score allows for tracking changes in corruption risks across the UK over time and by geographical area (Figure 5). It also allows for identifying local administrations with the highest risk performance across the UK (Figure 6). To give a sense of what these local differences mean in terms of the quality of institutions, Corruption Risk Index scores above 0.3 mark institutional quality similar to that of Romania or Hungary, while those with slightly lower corruption risks are very similar to Italy (Corruption Risk Index =0.28).

FIGURE 5. AVERAGE CORRUPTION RISK INDEX SCORES ACROSS THE UK, 2009-2013, SEMI-ANNUAL RESOLUTION, N=105,202 CONTRACTS



Source: own calculations using European Commission-DG Internal Market and Services (2015)

FIGURE 6. DISTRIBUTION OF UK SETTLEMENTS ACCORDING TO THE CORRUPTION RISK INDEX OF THE PROCURING ENTITIES LOCATED IN THEM, 2009-2013, SETTLEMENTS WITH AT LEAST 200 CONTRACTS AWARDED, N=90,967 CONTRACTS



Source: own calculations using European Commission-DG Internal Market and Services (2015)

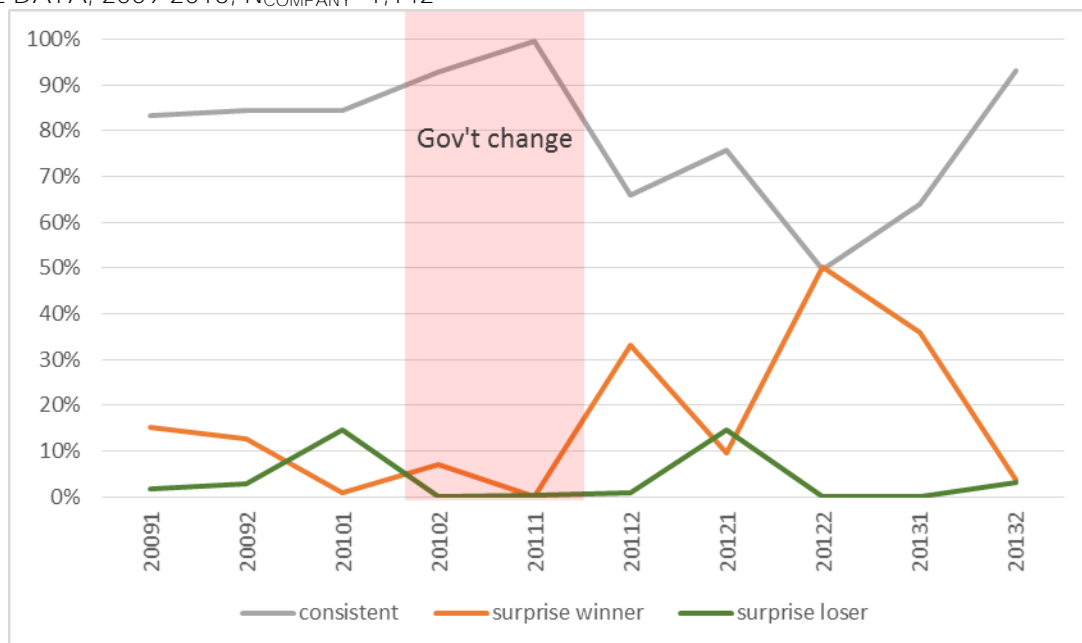
Note: Settlements were identified using raw settlement name strings, hence name spelling might influence the results.



In addition to the Corruption Risk Index, another indicator is established by tracking company success throughout changes in government. It is possible to identify companies whose success depends on there being a particular party in power, to arrive at an additional indicator of government favouritism (Fazekas & Tóth, 2014). Applying this methodology to the change of government in the UK central administration in 2010 suggests that such forms of political favouritism are rare, especially compared to the considerably higher corruption risk environment in countries such as Hungary. However, such a phenomenon is not completely absent in the UK (

Figure 7). Companies whose success rate on the public procurement market is consistent with a purely economic logic – i.e., unaffected by government change - jointly control about 60-90% of the total market. Companies whose success changes considerably with the change in government (either positively or negatively) control the remainder of the market; these are termed ‘surprise winners’ and ‘surprise losers’. Some of these companies also have a high Corruption Risk Index value, again suggesting that their success may owe something to their political connections rather than their merit.

FIGURE 7. COMBINED MARKET SHARES OF COMPANY TYPES, UK CENTRAL GOVERNMENT, SEMI-ANNUAL DATA, 2009-2013, $N_{\text{COMPANY}}=1,142$



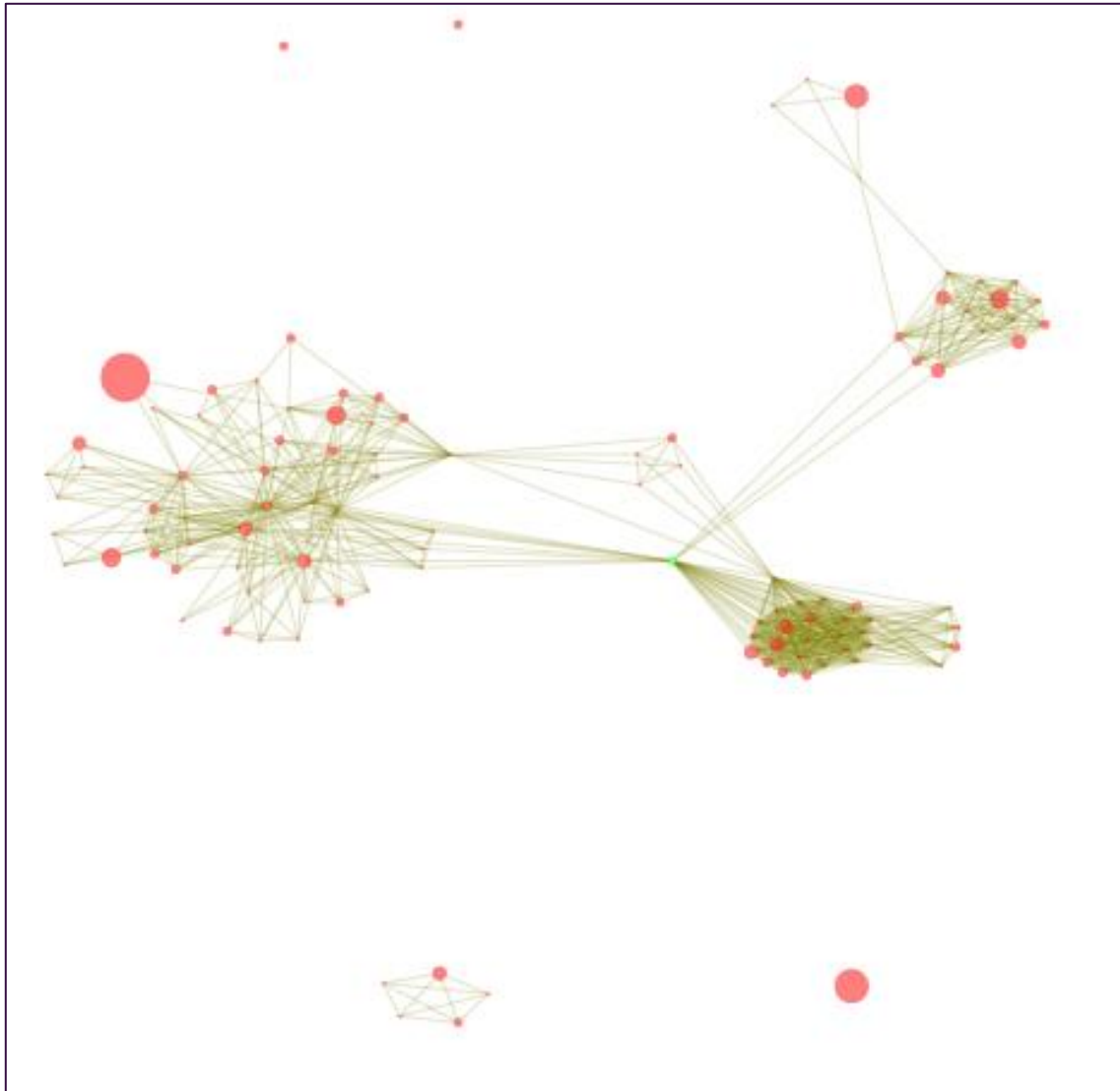
Source: own calculations using European Commission-DG Internal Market and Services (2015)

Corruption in public procurement may be separate from collusion among bidding firms, but can also be related. In many cases, corruption and collusion reinforce each other in creating a stable system of corrupt rent extraction over longer periods (Tóth, Fazekas, Czibik, & Tóth, 2014). One example of measuring the risk of collusion among bidding firms makes use of a sophisticated analysis of co-bidding patterns. This example is explained here, using data from Hungary, to illustrate how the tool might be used in the UK context. On geographical sub-markets for road construction in Hungary, one sub-market markedly increased average prices between 2007 and 2009. Our analysis suggests that, during this time period, there was a distinct change in the network structure of co-bidding and the presence of ‘cut-points’, i.e., a set of companies bidding only with one another on the same market, with one company serving as the gatekeeper to the sub-network. In 2007, elementary risk indicators

were fairly low: the market share of the largest company was close to the average of other sub-markets and prices were even somewhat better than in the benchmark markets. This coincided with the almost complete lack of cut-points (

Figure 8).

FIGURE 8. CO-BIDDING NETWORK, ROAD CONSTRUCTION³⁰, GREAT PLAIN AND NORTH HUNGARY, 2007



Source: (Tóth et al., 2014)

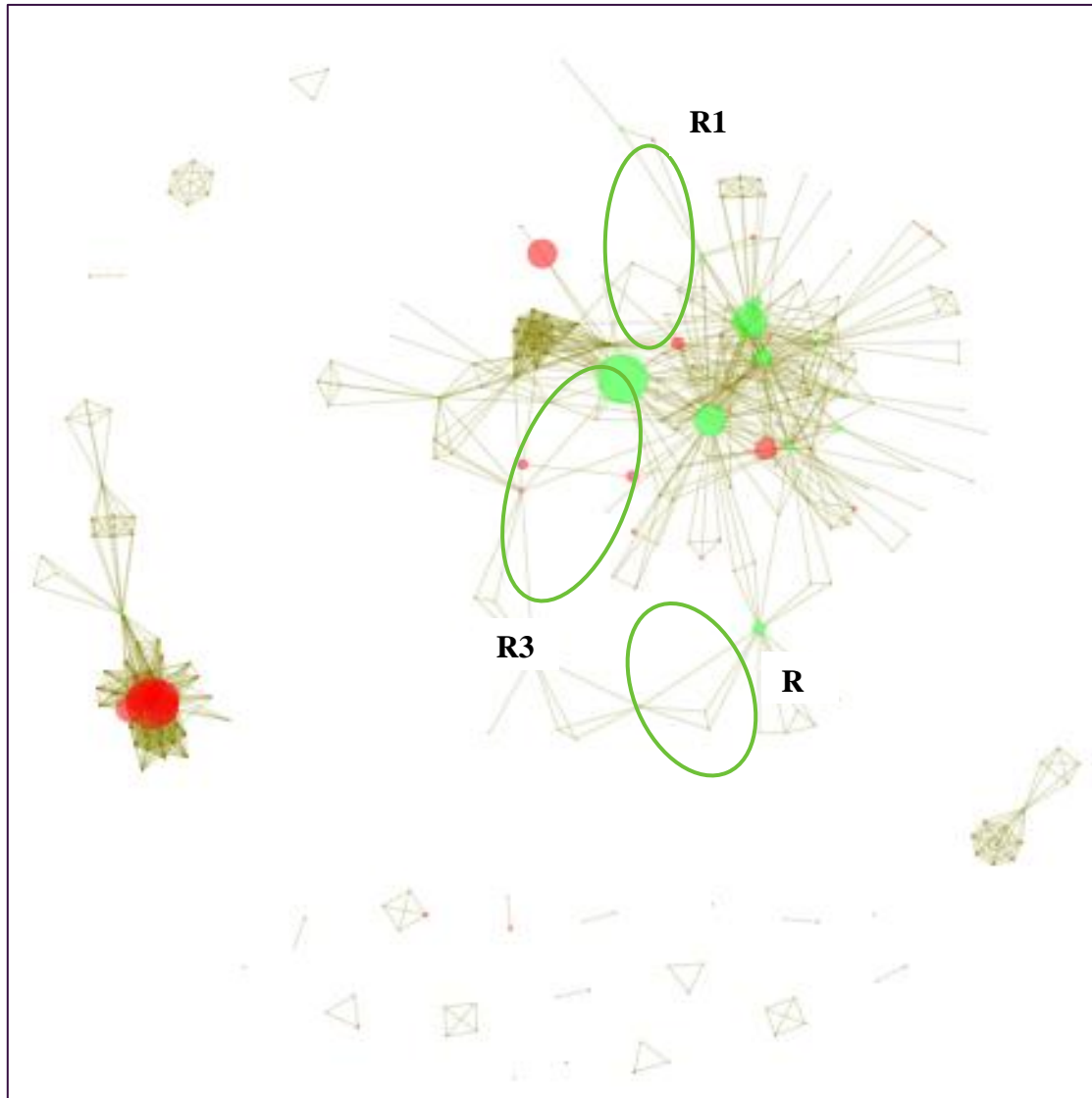
Note: node=bidding firm; node size=number of contracts won; green node=cut-point position; red node=non-cut-point position; ties=joint bidding on a tender

By 2009, multiple elementary collusion risk indicators suggest high risks: the market share of the largest company on the market had increased drastically, while prices also jumped to a much higher level. In addition, multiple cut-point formations emerged (Figure 9). In these formations (marked with R1, R2, and R3 and circled in red on the below figure), the companies positioned as cut-points won

³⁰ CPV= 4523: Construction work for pipelines, communication and power lines, for highways, roads, airfields and railways; flatwork.

many contracts while their smaller groups of co-bidders hardly ever won. This may indicate the presence of a bidding ring with the cut-point company collecting rents from collusion and the companies in the sub-graph submitting deliberately losing bids. Further signs of collusive bidding are also present: a higher likelihood of contract value being above estimated contract value and more extensive use of subcontractors.

FIGURE 9. CO-BIDDING NETWORK, ROAD CONSTRUCTION³¹, GREAT PLAIN AND NORTH HUNGARY, 2009



Source: (Tóth et al., 2014)

Note: node=bidding firm; node size=number of contracts won; green node=cut-point position; red node=non-cut-point position; ties=joint bidding on a tender

³¹ CPV= 4523: Construction work for pipelines, communication and power lines, for highways, roads, airfields and railways; flatwork.

5. Policy Recommendations

5.1 Investing in Data Infrastructure

Providing essential information on the public procurement process and its outcomes throughout the UK is an elementary precondition to developing such 'Big Data' analytics and stepping up the fight against corruption. Hence, consider

Developing a public procurement data infrastructure which is of wide scope, high quality, and readily linked to relevant datasets.

Making open data available for contracts above 10,000 GBP is highly ambitious in an international context; its applicability should ideally be extended to the whole UK public procurement system. Sectoral exceptions such as defence and security or special services should be tightly regulated to avoid unnecessary restrictions on public scrutiny. An IT infrastructure should be set up so as to automatically check data quality in terms of missing or inconsistent information and validity of data entries.

Public procurement data should be linked to further datasets such as the

- company financial and registry data;
- company ownership and officeholder data;
- public sector data concerning the financial performance of public organisations; and
- politically exposed persons' list.

Linking datasets allows for cross-validating information such as whether there are contracts missing from ContratsFinder and to develop additional risk indicators such as public organisation overspending due to mismanaged procurement contracts.

Such an extensive database is described in detail by a new Horizon 2020-funded research project led by the University of Cambridge called Digiwhist which will also benchmark national public procurement systems in comparison to this ideal data template. Database building and the upgrade of the IT infrastructure underpinning public procurement processes and reporting will be profoundly affected by the transposition of the EU public procurement package³² which foresees the implementation of a fully electronic tendering system by every member state by September 2018³³.

Transparency about company ownership is a critical step in detecting corruption risks. The UK government's recent move to introduce a publicly accessible central registry of company beneficial ownership information are to be welcomed. This is essential to enabling cross-checking of analytical tools concerning public procurement. The primary and secondary legislation necessary to take this forward should be advanced.

The primary argument for this recommendation is that it provides the foundation for systematically and regularly monitoring public procurement performance including, but not limited to corruption risks. Such monitoring framework would allow for more targeted law enforcement work and it would also enable monitoring of progress towards stated policy goals. In addition, a government contracting data which has a wide scope, is of high quality, and is readily linked to company datasets allows for

³² http://ec.europa.eu/growth/single-market/public-procurement/modernising-rules/reform-proposals/index_en.htm

³³ Some aspects of the e-Procurement will already be mandatory from March 2016.

private sector initiatives to develop, increasing market transparency and efficiency. The main counter-arguments of this recommendation are that it increases red tape and bureaucratic burden and that it requires additional investment in IT systems in times of austerity. However, the 'Big Data' solution proposed here is strictly limited publishing data which is anyways recorded by the contracting entity. Hence, manually copying or automatically feeding data from local systems into a central database is considered as minimal additional administrative burden as for example the experience of Slovakia has demonstrated this (Šípoš et al., 2015).

5.2 Introducing corruption and collusion risk indicators

'Big Data' in government contracting is highly diverse and complex making its use possible for specialists with both public procurement expertise and advanced quantitative skills. However, the average user of public procurement and related datasets most likely lacks such skills, hence consider

Introducing a set of user-friendly intuitive risk indicators underpinning government and civil society use of government contracting data.

Elementary indicators should characterise: 1) transparency of bidding such as whether the call for tenders was published on ContractsFinder; 2) prices and the nature of competition such as the number of bids submitted and origin of bidding firms; 3) tendering process-related red flags such as unusually short advertisement periods or overly convoluted bidding criteria; 4) tendering outcome-related red flags such as unusually high market share companies or government suppliers registered in tax havens; and 5) bidder constellation-related red flags such as indicators of coordinated bidding (i.e. cartels).

The main argument underpinning this recommendation is that 'Big Data' in government contracting is dauntingly complex making its intelligible use possible only for experts which greatly limits the usefulness of such data for governments, civil society, and businesses. However, the careful development and thorough testing of summary indicators of phenomena ranging from intensity of competition to collusion risks greatly increase the range of potential users. However, there are arguments against this recommendation too: summary indicators mask a great variety of processes and they may be used in an over-simplified manner. In addition, indicator development and presentation require some initial investment and ongoing maintenance work to keep up the quality of the monitoring framework.

5.3 Making risk indicators part of every-day policy making

Public procurement data and indicators can only exert positive influence on government contracting in the UK, if these are used by the relevant stakeholders as part of their every-day activities. As governments and civil society typically suffer from information overload, consider:

Developing institutionalised channels through which stakeholders can become informed of key public procurement analytics and findings.

A number of stakeholders would benefit from easy access to procurement data and analytics. For governments, such tools can be useful in: 1) in designing policy reforms by evaluating the success of spending programmes; 2) targeting capacity development programmes to selected public bodies;

and 3) implementing a risk-based audit system for government contracts. For law enforcement and counter-fraud agencies, such data can help with detecting patterns of systemic risk as well as organisations and individuals that warrant further investigation. Civil society can predominantly utilize public procurement data and analytics for 4) holding governments accountable for spending decisions; and 5) investigating and revealing corruption cases. Our research also suggests that 6) law enforcement agencies benefit from the provision of open data, since they can access information without alerting perpetrators of a crime by making formal requests. Open procurement data platforms from Central and Eastern Europe provide good practice of potential public dissemination tools³⁴. The ongoing Digiwhist project will deploy a similar, but upgraded web portal for public use in 2016.

The main argument for this recommendation is that datasets and intelligible indicators are only useful if they become part of stakeholders' every-day work. Supporting this, requires careful thinking and some investment into those institutionalised channels which would inform the public. Information overload and inability to draw stakeholders into the regular use of government contracting data and analytics are two major risks of this recommendation.

5.4 Establishing an Office for Public Procurement

The growth of public procurement and the overall policy direction towards greater private-sector involvement in the provision of public goods and services raise a number of accountability challenges which have not yet been adequately explored. The new methodology for analysing governance irregularities and corruption risks in public procurement outlined in this report provides potential for undertaking a much more systematic analysis of how this substantial and increasing share of public money is spent.

Moreover, open data and analytical tools can be very important for detecting corruption, but it is critical that there is also sufficient dedicated investigative capacity to receive and act on reports of suspicious activity. Without this element, open data cannot be a useful tool for reducing corruption (Dávid-Barrett et al., 2015). Thus, while many bodies might be involved in scrutinising public procurement data and analytics, the responsibility for overseeing such tools should ideally rest with one (semi-) independent body. The Competition and Markets Authority, which has historically considered corruption only in the context of private-private collusion, is ill-equipped to consider the public-sector side. We recommend:

Establishing a dedicated Office for Public Procurement with responsibility for overseeing and analysing all government procurement, including central, local, devolved, and NHS.

This could act as:

- Research tool. The Office for Public Procurement (OPP) would be responsible for the collection, publication and analysis of data in line with recommendations 1-3.

³⁴ See for example http://kozpenzkereso.eu/?sf_culture=en of Hungary or <http://zindex.cz/> of the Czech Republic.

- A policy initiator. The OPP would be responsible for developing best practice on public procurement, including a set of counter-fraud tools, on the basis of its ongoing analysis of procurement practices. The CCS currently performs a policy initiator role for central government procurement, but this would be more appropriately situated in an independent body, while the OPP would also advise on local government procurement)³⁵.
- A watchdog. The OPP would be a go-to body with which to raise suspicions of misconduct relating to public procurement, perpetrated by either public officials or competing bidders. This could be achieved by offering an anonymous and confidential whistleblower hotline to receive complaints. The OPP would be responsible for deciding whether further investigation was required and, in cases where it was, would either undertake that role itself or require an external auditor to undertake that role.
- A training body and human capital resource. The OPP would be responsible for upgrading the contracting and procurement expertise of contracting authorities across the UK. This would build on the role currently undertaken by the Commissioning Academy, but also create a pool of mobile contracting experts that could be seconded to different projects at different levels of government according to need.

Governance structures should be established to ensure that other stakeholders – including government agencies, law enforcement, competing bidders and civil society actors – can easily report suspicions to such an agency.

The main argument for this institution is that public procurement represents such a substantive part of UK government activity, and increasingly so, that it merits a dedicated institution. Moreover, such an institution can only perform its role adequately if it is independent of contracting authorities. The counter-argument for establishing such an OPP might be that there is little appetite to establish such an institution given the austerity environment, or that some of these functions are already in existence in other institutions. However, given the large value of procurement spending in the UK, even a small percentage saving achieved by better oversight and training could well pay for the additional investment.

5.5 Improving Public Integrity Rules

Rules about conflicts of interest for public officials and politicians in the UK are inadequate for the new interface between the state and the private sector (i.e., increased outsourcing, public-private partnerships). Rules about the ‘revolving door’ are outdated, given increased secondments from industry to the civil service, more flexible individual career paths and greater public-private collaboration in the delivery of public services (Dávid-Barrett, 2011). Moreover, compliance with rules about conflicts of interest and the revolving door is scarcely monitored, while sanctions for those found to be in breach of these laws are rarely imposed. Many other countries now routinely require public servants to publish asset declarations and some have instituted ways of cross-checking such declarations with tax records. We recommend:

Establishing a temporary commission on public integrity in the interface between the state and the private sector to learn from best practice in other countries, establish whether such practices are relevant for the UK context, and reform the rules as necessary.

³⁵ Some tools could be easily transferred from the Counter-Fraud practice of the former Audit Commission.



The argument for this recommendation is that the nature of the relationship between the state and the private sector has been transformed in the last 30 years, not only in the UK, but also in other OECD countries and in developing countries. This has been driven partly by theory about the efficiency gains from introducing market logic to public service provision, but also by an increasing need to reduce public spending. These changes have led to a number of new risks of poor governance and even corruption, and yet those risks have not been adequately addressed by simultaneously reforming the architecture around integrity in the provision of public goods and services. New accountability structures should, for example, arguably apply not only to those employed by the state but also to those in the private sector who provide public services. Therefore a temporary commission should be established to consider these issues and to recommend changes to UK accountability mechanisms, to ensure that the UK maintains its place as a role model for public accountability. The counter-argument is that the UK already has a Committee on Standards in Public Life. While that Committee does important work and has looked at some of these issues in recent reports, the need now is to bring together a range of different stakeholders and to cast the net widely to consider a variety of international comparisons.

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Annex A – Contracts Finder data content

TABLE A1: AVAILABLE INFORMATION AT CONTRACTSFINDER.SERVICE.GOV.UK

Contract notice (Call for tender) [open and closed]	Contract award
<ul style="list-style-type: none">▪ Contract summary<ul style="list-style-type: none">○ Industry○ Location of contract○ Value of contract (£)○ Published date○ Closing date○ Contract start date○ Contract end date▪ Description▪ About the buyer<ul style="list-style-type: none">○ address○ e-mail○ telephone▪ Other information<ul style="list-style-type: none">○ Attachments▪ How to apply	<ul style="list-style-type: none">▪ Contract summary<ul style="list-style-type: none">○ Industry○ Location of contract (e.g. East Midlands)○ Value of contract (£)○ Published date○ Closing date○ Contract start date○ Contract end date▪ Description▪ About the buyer<ul style="list-style-type: none">○ Contact name○ address○ Telephone○ e-mail○ website▪ Awarded information<ul style="list-style-type: none">○ supplier's name○ Value of contract (£)○ Contract start date○ Contract end date○ Supplier's address▪ tender documents available at mytender.org