Citation for published version:

Walker, HL & Brammer, S 2007 'Sustainable procurement in the United Kingdom public sector' Bath, U. K.

Publication date:
2007

[Link to publication](#)

University of Bath

Alternative formats

If you require this document in an alternative format, please contact:
openaccess@bath.ac.uk

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Sustainable procurement in the United Kingdom public sector

Helen Walker and Stephen Brammer

University of Bath
School of Management
Working Paper Series
2007.15

This working paper is produced for discussion purposes only. The papers are expected to be published in due course, in revised form and should not be quoted without the author's permission.

**University of Bath School of Management
Working Paper Series**

School of Management
Claverton Down
Bath
BA2 7AY
United Kingdom
Tel: +44 1225 826742
Fax: +44 1225 826473
<http://www.bath.ac.uk/management/research/papers.htm>

2007		
2007.01	Fotios Pasiouras	International evidence on the impact of regulations and supervision on banks' technical efficiency: an application of two-stage data envelopment analysis
2007.02	Richard Fairchild	Audit Tenure, Report Qualification, and Fraud
2007.03	Robert Heath & Paul Feldwick	50 Years using the wrong model of TV advertising
2007.04	Stephan C. Henneberg, Daniel Rohrmus & Carla Ramos	Sense-making and Cognition in Business Networks: Conceptualisation and Propositional Development
2007.05	Fotios Pasiouras, Sailesh Tanna & Constantin Zopounidis	Regulations, supervision and banks' cost and profit efficiency around the world: a stochastic frontier approach
2007.06	Johan Lindeque, Mark Lund & Steven McGuire	Non-Market Strategies, Corporate Political Activity and Organizational Social Capital: The US Anti-Dumping and Countervailing Duty Process
2007.07	Robert Heath	Emotional Persuasion in Advertising: A Hierarchy-of-Processing Model
2007.08	Joyce Yi-Hui Lee & Niki Panteli	A Framework for understanding Conflicts in Global Virtual Alliances
2007.09	Robert Heath	How do we predict advertising attention and engagement?

2007.10	Patchareeporn Pluempavarn & Niki Panteli	The Creation of Social Identity Through Weblogging
2007.11	Richard Fairchild	Managerial Overconfidence, Agency Problems, Financing Decisions and Firm Performance.
2007.12	Fotios Pasiouras, Emmanouil Sifodaskalakis & Constantin Zopounidis	Estimating and analysing the cost efficiency of Greek cooperative banks: an application of two- stage data envelopment analysis
2007.13	Fotios Pasiouras and Emmanouil Sifodaskalakis	Total Factor Productivity Change of Greek Cooperative Banks
2007.14	Paul Goodwin, Robert Fildes, Wing Yee Lee, Konstantinos Nikolopoulos & Michael Lawrence	Understanding the use of forecasting systems: an interpretive study in a supply-chain company
2007.15	Helen Walker and Stephen Brammer	Sustainable procurement in the United Kingdom public sector

Sustainable procurement in the United Kingdom public sector

Helen Walker^{1*} and Stephen Brammer²

* Corresponding Author

¹Centre for Research in Strategic Purchasing and Supply & ²Centre for Business, Organisation and Society, University of Bath School of Management, Claverton Down, Bath, BA2 7AY.

Tel: +44 1225 383151. Fax: +44 1255 383223.

H.L.Walker@Bath.ac.uk; S.J.A.Brammer@Bath.ac.uk.

Abstract

Purpose: This study investigates sustainable procurement in the United Kingdom public sector.

Methodology/ Approach: Sustainable procurement is investigated using a questionnaire that draws on established scales for 'Purchasing Social Responsibility' (Carter & Jennings, 2004). The survey has been administered across the UK public sector, and 106 responses have been received from procurement officers.

Findings: Analysis of quantitative and qualitative survey data reveals there is significant variation across public sector agencies in the nature of sustainable procurement practice. Local authorities have a particularly strong emphasis on buying from local and small suppliers relative to other sectors, health looks generally lower in many categories and education appears to have something of an emphasis on environmental aspects of sustainable procurement. Cost has been found to be the leading barrier to sustainable procurement, and top management support the leading facilitator.

Research limitations: There is likely to be selection bias in the sample, with those practitioners engaging in the sustainability agenda being more likely to have responded to the questionnaire.

Research implications: The United Kingdom government has an objective amongst the leaders in Europe on sustainable procurement by 2009, and early signs are encouraging that progress towards this goal is underway.

Originality/value of paper: This research provides the first survey of sustainable procurement practices across the UK public sector. It also provides a conceptual framework of influences upon the propensity to engage in sustainable procurement practice.

Keywords

Sustainable procurement, United Kingdom, public sector

Article classification

Research paper

Introduction

In response to the call made at the World Summit on Sustainable Development in 2002 to "promote public procurement policies that encourage development and diffusion of environmentally sound goods and services" (WSSD, 2002), the UK government, in 2005, stated its goal to be amongst the leaders in Europe on sustainable procurement by 2009 (DEFRA, 2005). Sustainable procurement (SP) is procurement that is consistent with the principles of sustainable development, such as ensuring a strong, healthy and just society, living within environmental limits, and promoting good governance. As McCrudden (2004:257) notes, SP therefore places government in two roles by "participating in the market as purchaser and at the same time regulating it through the use of its purchasing power to advance conceptions of social justice".

In this paper, we focus on public procurement. Public procurement is concerned with how public sector organizations spend tax payers' money on goods and services. Public procurement is guided by principles of transparency, accountability, and achieving value for money for citizens and tax payers. Public sector expenditure is substantial: government organizations across the world tend to spend between 8 and 25% of GDP on goods and services (OECD, 2006); in the United Kingdom (UK) public procurement expenditure is approximately £150 billion (DEFRA, 2007). Government is often the single biggest customer within a country, and governments can potentially use this purchasing power to influence the behaviour of private sector organisations. In particular, it has been noted that public procurement can be a lever to deliver broader government objectives, such as stimulating innovation in supply markets, using public money to support environmental or social objectives, and for supporting domestic markets (McCrudden, 2004).

A relatively well-developed body of research has investigated aspects of SP in private sector organisations, typically with a focus on manufacturing industries and the environmental dimension of sustainability (Simpson & Power, 2005; Srivastava, 2007; Svensson, 2007). For example, supply chain research in private sector organisations has studied logistics (Murphy & Poist, 2003; Sarkis, Meade, & Talluri, 2004), and product life cycles (Stonebraker & Liao, 2006). Studies have on the whole

focused on environmental issues in procurement, with the social aspects of SP being under-researched to date.

In contrast to the literature on private sector organisations, comparatively little research has investigated SP practices in the context of the public sector. Existing research has tended to focus on the development of tools to assist green procurement policy implementation (Coggburn, 2004; Günther & Scheibe, 2005; Li & Geiser, 2005; Swanson, Weissman, Davis, Socolof, & Davis, 2005), on how sustainability can be encouraged when the public sector buys from suppliers in specific industries, such as construction (Hall & Purchase, 2006), IT (Matthews & Axelrod, 2004), food (Rimington, Smith, & Hawkins, 2006), and timber (Bull et al., 2001) or in particular areas of the public sector (Thomson & Jackson, 2007). Other notable studies report a case study of sustainable public procurement in Belfast City Council (Murray, 2000), and describe the history and present use of government contracting as a tool of social regulation (McCrudden, 2004).

In this study we provide the first systematic and comprehensive insight into the state of SP practice in public sector organisations in the United Kingdom. Given the paucity of previous research on public procurement and its scale and significance, it is important to shed greater light on how public money is spent (McCrudden, 2004; Weiss & Thurbon, 2006). Drawing upon a sample of 106 organisations from across the public sector, we highlight the nature and extent of current SP practice, how this varies across different areas of the public sector, and what factors facilitate and retard the further development of sustainable public procurement. We make two particular contributions. First, our analysis provides an insight into the progress made in respect of the UK government's commitment to SP and, through this, the policies and interventions necessary to further develop SP practice in the UK. Second, our analysis focuses on the character of SP in public sector organisations and, by comparison with existing research in the private sector, we are able to illuminate the particular nature of SP in the public sector and the challenges faced by these organisations when compared to their private sector counterparts.

The paper is structured as follows. The following section develops our conceptual framework which we use to guide our analysis and reviews the policy context for SP

in the UK. Subsequently, we describe our empirical methods, report our findings. A final section discusses our study and draws some conclusions.

Conceptual framework and policy context

This section addresses two aims. First, we develop a conceptual framework that provides a lens through which to explore cross-sectoral variation in SP. Second, reflecting the importance of the extent and nature of policies concerning SP, we provide an overview of the character of such policies within parts of the public sector that are included in our subsequent empirical analysis.

Our conceptual framework (see figure 1, below) draws upon a previous framework (Gelderman, Ghijssen, & Brugman, 2006) and is informed by three conceptual paradigms that have been applied to issues concerned with procurement: the stakeholder, resource-based, and the power-dependence perspective (Barney, 1991; Cox, 1999; De Bakker & Nijhof, 2002; Gerrefi, 1999; Preston & Donaldson, 1999; Srivastava, 2007; Worthington, Ram, Boyal, & Shah., 2007). These perspectives respectively emphasise the importance of pressures on the organisation, often with a focus on the relationship between the organisation and external actors, the capabilities, skills, and knowledge at the organisation's disposal, and the detail of the relationship between supply-chain partners with a particular interest in the distribution of power within those relations (De Bakker et al., 2002; Hall, 2000; Sobczak, 2006; Srivastava, 2007; Worthington et al., 2007). The framework was developed in the context of examining the influences upon compliance with EU tendering directives (Gelderman et al., 2006) but, given its relatively general framing, provides a useful framework for examining the influences on the degree to which any aspect of public procurement policy translates into practice.

Figure 1: A conceptual model of the influences on sustainable public procurement adapted : (Gelderman et al., 2006)

The conceptual model, described in figure 1 above, begins from the starting point that sustainable public procurement arises primarily because of pressures on the organisation to undertake it. In the context of public procurement, the key pressures stem directly from the character of the policy environment with respect to sustainable public procurement, including a sense of how these relate to other objectives of public procurement such as obtaining value for money, defined as the “optimum combination of whole life cost and quality (fitness for purpose) to meet the user’s requirement” (HM Treasury, 2000). A further pressure is the need to abide by EU procurement directives that support open competition across the EU.

Beyond the character of an organisation’s policy environment regarding SP, the framework proposes four factors that influence the degree to which particular organisations implement SP practices. We will briefly discuss each of these in turn. The first factor focuses on the informational aspects to implementation of SP. In order for an organisation to be able to effectively implement SP activities, it is vital that organisations understand the concept of SP and government policies with respect to it and that they have the tools necessary to make SP happen.

The second factor emphasises the role of financial aspects of SP. In particular, perceptions of the financial viability of implementing SP are expected to play a crucial role in shaping the degree to which SP policies are acted upon since green/socially responsible production methods are often perceived of as being inherently more expensive than other methods. Given the tight budget constraints and countervailing objectives faced by most public sector organisations, perceptions

regarding the cost-effectiveness of SP are expected to play a particularly important role.

The third influence on the degree to which SP is implemented in organisations concerns organisational attitudes and incentives for SP. In part, this is a matter of organisational culture and the degree to which the prevailing climate in an organisation is supportive of sustainability and/or of change in general. In other respects, this dimension includes the extent to which there is support for SP at senior levels in an organisation and the degree to which organisational processes and structures support, or retard, the development of SP. Concerning the importance of organisational culture, earlier studies have suggested that public sector organisations, particularly NHS organisations, can exhibit cultures that are highly resistant to change (Cox, Chicksand, & Ireland, 2005). This suggests that these cultures, where they exist, may have adverse consequences for the implementation of SP.

The final driver of SP implementation centres on the supply-side of the SP transaction by emphasising the importance of the availability sustainably-produced goods and services for the ability of public sector organisations implementation of SP. Given that many of the goods and services procured by the public sector are highly specialist, it is possible that identifying sustainable sources of supply may be very challenging in some contexts.

Having outlined our conceptual framework, we now move on to discuss the character of government policies with respect to SP in the UK, the wider public procurement context within which these policies operate and how SP policies and plans for their implementation vary across the public sector. An initial SP policy framework has been set for the UK public sector (DEFRA, 2007), shown below. In the policy framework it can be observed that all of the mandatory sustainable operations targets (a-c), and most of the 10 priority categories of expenditure are environmentally focussed. There appears to be little prioritisation of the social aspects of SP.

‘Within the wider context of sustainable development, climate change mitigation and natural resource protection are the highest priorities. Public sector procurers will define their requirements and choose solutions and providers that assist them to achieve progress towards the published sustainable operations targets and which:

- a. help to achieve reductions of carbon emissions, energy and water consumption, and waste generation and recycling in line with targets for the Central Government Estate;
- b. help to protect biodiversity;
- c. do not use unsustainable or illegal timber/timber products.

Through adherence to:

- OGC/Defra joint note on Environmental Issues in Purchasing;
- OGC's Achieving Excellence in Construction suite of guidance which has been mandated through the common minimum standards process.
- Government Approved Product Environmental Standards (Quick-wins).
- Central Point of Expertise on Timber guidance on proforest.net

And focusing future efforts on the following broad categories of expenditure (identified by the Task Force):

1. construction (building and refit, highways and local roads, operations and maintenance);
2. Health and Social Care (operating costs of hospitals, care homes, social care provision);
3. Food;
4. Uniforms, clothing and other textiles;
5. Waste;
6. Pulp, paper and printing;
7. Energy;
8. Consumables – office machinery and computers;
9. Furniture;
10. Transport (business travel, motor vehicles).

Organisations with the capacity, capability and confidence to go beyond these priorities and wishing to pursue best practice can find best practice guidance notes on the OGC website and are encouraged to develop supplementary departmental priorities, as appropriate.'

Initial sustainable procurement policy framework (DEFRA, 2007)

Different parts of the public sector have also developed SP policies to guide practitioners, shown in table 1 below.

Local government (Local Government Sustainable Procurement Task Group, 2007)	<p>'Councils, working with local partners, will pursue the achievement of social, economic and environmental benefits through the Sustainable Community Strategy, Local Strategic Partnership and Local Area Agreement. This will include leveraging the purchasing power of the partners. . .</p> <p>Socio-economic benefits range from the creation of employment and training opportunities for the long-term unemployed and people with disabilities to the elimination of child labour. . .</p> <p>Intelligent public procurement can also capture innovation from small businesses (SMEs) and third sector organisations (TSOs) while realising wider benefits for local communities. This includes the engagement of SMEs and smaller TSOs in the supply chains for major projects.'</p>
Department of Health (DH, 2007)	<p>'The overall aim of the Department of Health is to improve the health and wellbeing of the people of England. Sustainable development has an important role to play in this. It is when considering the balance of social, environmental and economic factors that we realise that what we buy, and how we buy it, has such an important role to play. . . .</p> <p>The commercial landscape within health has been evolving rapidly over recent years, with the increasing importance of primary care trusts in delivering the patient choice agenda. The emergence of NHS collaborative procurement organisations and foundation trusts, plurality of provision, the expansion of major private finance initiative (PFI) projects and the outsourcing of logistics and procurement functions to the newly-formed NHS Supply Chain have also played their part. . .</p>

	The SPTF report identified “Health and Social Care (operating costs of hospitals, care homes, social care provision)” as one of its public sector priority spend areas. . . With the complexity of the NHS procurement landscape mentioned, priorities should be identified and existing minimum standards embraced. Determining minimum standards in the NHS needs to be viewed as an ongoing process consistent with procuring the delivery of safe and effective healthcare.’
Higher Education CSR group (Proc HE, 2007)	‘Welcome to the Association of University Procurement Officers (AUPO) CSR group web pages. The objective of these pages, indeed the group is to assist people involved in procurement to understand the key aspects of CSR as it impacts on Universities and to provide support through the use of toolkits, guidance materials and the content of web links. The group also commits itself to acting as the voice of the HE procurement community both within and outside of HE, in matters relating to CSR. It actively seeks to promote the key role procurement has to play in CSR activities and to raise the profile of procurement in such activities. The group works closely with the Proc-HE Standards and Good Practice Group.’

Table 1: SP policy documents from across the public sector

Consistent with our conceptual model (Figure 1), different parts of the public sector face different influences, challenges and competing procurement objectives in implementing SP policy. In local government, there is a pressure to support local economies and communities by buying from local businesses. In health, the overriding concern is with choosing products and services that are best for patient care, and that are preferred by clinicians. Some areas of spend will not lend themselves to sustainability. It may not be appropriate for suppliers to provide recyclable medical consumables such as swabs, needles and bandages. In addition, there is a high degree of autonomy in NHS hospitals, which means that adoption of SP policies may be inconsistent. In higher education, there is a particularly high use of paper which may present an opportunity for SP. In addition, stakeholders in education such as students may exert additional influences to buy green or fair trade products.

Methodology

Sample

In order to obtain a comprehensive view of SP practice across the UK’s public sector, we emailed our survey instrument to organisations across the public sector, for forwarding to procurement officers. Organisations contacted included the NHS Purchasing and Supply Agency, the Health Care Supplies Association, CIPS, Procurement in Higher Education, Department for Education and Skills, Defence Procurement Office, Defence Estates, Association of Police Procurement Officers,

FireBuy (procurement for Fire Service), and Local Government Centres of Excellence. In total, 106 responses were received, representing a response rate of around 10%. The total spending of sample organisations is approximately £25BN, or about 17% of the estimated procurement spend of the public sector of £150 BN (DEFRA, 2006) and roughly 10% of the public sector's annually managed expenditure (which was £249.5 BN in 2005/6).

Concerning the extent to which our sample is representative of the UK public sector, table 2 shows how our sample compares with the size of department procurement spend (DEFRA, 2006). Table 2 shows that our sample consists to a greater than representative extent of organisations in local government, health and education areas and to a less than representative extent of other organisations. Hence, while not strictly representative, our sample is certainly inclusive of the breadth of organisations founding the UK public sector and should, therefore, provide a good basis for establishing the depth and breadth of engagement with SP practice.

Government Department	Total spend (billions)	% of total government procurement spend	% in our sample
Local government	£39.8 BN	26.5%	38.7%
Health	£30.1 BN	20.1%	26.4%
Other departments inc Education	£13.8 BN	9.2%	19.8%
Other	£66.3 BN	44.2%	15.1%
Total	£150 BN	100%	100%

Table 2 Procurement spend across government departments (DEFRA, 2006) and percentage response rates for our sample.

Table 3 describes some of the other characteristics of sample organisations and how they vary across areas of the public sector. For example, Health organisations are, on average larger, but have relatively fewer suppliers.

	All Sectors	General Public Services	Health	Education	Other Sectors
Panel A - Sectoral Composition of Sample					
Number of organisations	106	41	28	21	16
Percentage of Sample	100.0%	38.7%	26.4%	19.8%	15.1%

Panel B - Descriptive Statistics for numbers of suppliers and contract length

Average Contract Length (years)	3.5	3.8	3.0	3.3	4.1
Average No. of suppliers	3,726	5,085	2,066	4,833	1,577

In the last 10 years, our total number of suppliers has:

Stayed the same	28.3%	27.5%	54.2%	10.0%	13.3%
Reduced	42.4%	40.0%	20.8%	50.0%	73.3%
Increased	29.3%	32.5%	25.0%	40.0%	13.3%
% Change up or down	18.3	15.9	-16.3	54.6	-14.4

Panel C - Descriptive statistics for expenditure and supplier concentration

Average expenditure (£M)	238,271	165,226	297,256	237,644	323,833
% Spend with top 3 suppliers	21.6	24.4	18.9	19.1	22.4

Table 3 Sample composition and descriptive statistics

Measuring sustainable procurement

In order to investigate SP, we used scales developed in a previous study of Purchasing Social Responsibility (PSR) (Carter et al., 2004). PSR embodies a wide range of aspects of purchasing that relate to the social and environmental improvements. Making use of the PSR scale has the advantage of making use of a scale with proven reliability and validity. As Carter et al., (2004) demonstrate, PSR is a higher-order construct consisting of five unique dimensions: the environment, diversity, human rights, philanthropy, and safety. In order to reflect the breadth of the concept of sustainability as applied to the context of procurement, we drew on the PSR scale items, and added two on buying from small and local suppliers. The questionnaire was reviewed by an expert panel and piloted with 10 public sector procurement officers, to ensure the face validity and efficacy of the items in a public sector context.

We also sought qualitative data to understand issues concerning SP practice in more depth. Participants were asked to describe barriers and enablers to SP. The qualitative data were coded by categorising and counting the incidence of respondent's listed barriers and facilitators. The qualitative data was coded until there was a 'saturation of categories' (Miles & Huberman, 1994) and no further categories occurred. Two researchers conducted the analysis separately to help ensure the categorisation was valid. The qualitative data are summarized in incidence tables in the findings section.

Findings

In this section we discuss our findings. We begin by evaluating the character of SP practices in sample organisations before examining the degree to which this varies across areas of the public sector. Subsequently, we highlight factors that respondents perceive of as facilitators of and barriers to greater involvement in SP. Table 4 provides a representation of the degree to which 16 aspects of SP practice in the UK are embodied in current practice. The figures presented in table 4 are the means for responses on a 5-point Likert scale (where 1 = strongly disagree and 5 = strongly agree) to a question phrased as: “currently our purchasing function...”. The last column of table 4 provides an overall average across all the organisations surveyed and therefore affords an insight into which SP practices are most commonly embedded in current practice in UK public sector organisations. The highest averages found concern procurement from small and local companies, followed by concerns related to the health, safety and labour practices in suppliers and relating to the management of incoming supplies. The least embedded practices included those associated with buying from women and minority-owned businesses and those relating to deeply embedded aspects of environmental purchasing including those to do with product design for recycling and disassembly.

Hence, contrary to the current emphasis in policy, the public sector seems currently to be focused on the social and economic, rather than environmental, aspects of SP. Instead, public sector organisations appear to be oriented towards supporting local economies and communities by buying from small and local suppliers, providing EU procurement regulations are followed (Arrowsmith, 1995). By placing public contracts in a strategic way, goals such as social cohesion, the combat of long-term unemployment and the achievement of acceptable standards of living can be fostered.

	Variable Means on 5-point Likert scale; 1 = Disagree strongly - 5 = Agree strongly				
	General Public Services	Health	Education	Others	All
	41	28	21	16	106
<i>Sustainable Procurement</i>					
Uses a life-cycle analysis to evaluate the environmental friendliness of products and packaging	2.71	2.71	3.00	2.87	2.79
Has a formal MWBE supplier purchase programme	2.17	2.07	2.19	2.33	2.17
Participates in the design of products for recycling or reuse	2.24	2.46	2.71	2.20	2.39
Ensures the safe, incoming movement of product to our facilities	3.22	3.50	3.71	3.53	3.44
Purchases from MWBE suppliers	2.49	2.29	2.86	2.67	2.53
Volunteers at local charities	2.83	2.33	2.90	2.47	2.66
Asks suppliers to commit to waste reduction goals	2.88	2.75	3.62	2.87	2.99
Purchases from small suppliers	4.27	3.54	4.05	3.80	3.96
Visits suppliers' plants to ensure that they are not using sweatshop labour	2.49	2.04	2.90	2.80	2.50
Participates in the design of products for disassembly	2.34	2.07	2.33	2.33	2.27
Asks suppliers to pay a 'living wage' greater than a country's or region's minimum wage	2.78	2.29	2.90	2.53	2.64
Donates to philanthropic organizations	2.61	2.14	2.48	2.60	2.46
Ensures that suppliers' locations are operated in a safe manner	3.39	2.93	3.67	3.40	3.32
Ensures that suppliers comply with child labour laws	3.34	3.32	3.67	3.27	3.39
Purchases from local suppliers	4.23	3.50	3.71	3.40	3.81
Reduces packaging material	3.24	3.25	3.67	3.07	3.30

Table 4: Cross sector variation in SP practice

The columns of table 4 separate the sample according to the area of the public sector that particular organisations are attributable to. The conceptual framework developed above and the discussion of the implementation of policy in particular sectors both suggest that SP practice may vary systematically across the public sector according to differences in the emphasis of policy and the particular constraints that specific organisations face. Consistent with this, the evidence presented in table 4 suggests that there is very significant variation in the character of SP practice across public sector agencies within the UK. In particular, local authorities (the bulk of the general public services category) have a particularly strong emphasis on local/small business aspects of procurement relative to other sectors, while the health sector looks generally lower in many categories and education appears to have an emphasis on environmental aspects of SP such as those to do with waste and packaging reduction.

The General Public Services group has a significantly higher mean than other groups on buying from small suppliers ($p=0.002$) and from local suppliers ($p=0.000$), suggesting that these agencies pursue SP because it may be congruent with other performance imperatives such as supporting local businesses and local regeneration. This seems possible in the context of local procurement from small businesses by local authorities. In contrast, the implementation of SP in Health appears to present some challenges; the Health group has a significantly lower mean than other groups on a range of SP practices including purchasing from MWBE suppliers ($p=0.066$), volunteers at local charities ($p=0.020$), purchasing from small suppliers ($p=0.001$), ensuring that suppliers locations are operated in a safe manner ($p=0.015$), and purchasing from local suppliers ($p=0.026$). Some potential reasons for particular challenges in the healthcare context may be conflicting priorities, as patient care considerations take precedence over sustainability in making purchasing choices. The Education group has a significantly higher mean than other groups on design for recycling ($p=0.060$), buying from minority and women owned suppliers ($p=0.046$), waste reduction ($p=0.002$), sweatshop labour ($p=0.037$) and reducing packaging ($p=0.051$). Hence, organisations involved in education appear to be leading in environmental aspects of SP.

In an attempt to explain the variation across sectors in the pattern of SP observed and to enrich our quantitative analysis, we supplemented the scale-based questions with open-ended questions concerning perceived barriers to, and facilitators of, SP practices. These were coded and the incidence of particular codes across sectors is reported in tables 5 (barriers) and 6 (facilitators). Regarding barriers, the evidence reported in table 5 suggests that perceptions of the financial viability of SP were clearly the most important factors. Numerous respondents highlighted that the prohibitive costs of SP, the lack of sufficiently large budgets to accommodate SP and other financially-oriented issues. Cost concerns also had a significantly higher incidence in the health sector. For example, one health supplies manager commented:

“(The biggest barriers are) . . . resource and cost pressures; the expertise exists but the focus remains on risk mitigation rather than positive promotion (of SP)”

Some respondents commented on fear of change and awareness. One defence procurement officer commented:

“(Barriers include) lack of awareness, and this being a new phenomenon with little comparative value. For example, finance is easy to measure in comparison, environmental impact is less so. Budgetary pressures are also barriers, and short versus long termism. Fear of change and laissez faire attitude prevent people engaging in this agenda.”

The devolved structure of purchasing in the public sector can present a problem, illustrated in the following quote from a procurement officer in education:

“The devolved purchasing structure makes it difficult to manage the SP across the board in all product areas. Although we work closely with our environmental colleagues we do not have the knowledge or resources to verify all sustainability claims and standards as effectively as we would like to do.”

Barriers	General Public Services	Health	Education	Other	All
Cost / price	19	21	7	3	50
Awareness	6	5	4	3	18
Lack resources	1	10	3		14
Lack budget	1	5	2	3	11
Decentralised/devolved	5	2	3	1	11
Conflicting priorities	2	6	2		10
Perceptions of cost	5	2	1		8
Attitude / culture	3	2	2	1	8
Lack long term view	4	3		1	8
Lack top management commitment	4	3			7
Quality criteria	4	1	1		6
Supplier availability/awareness	5	1			6
Lack political support	2		1	1	4
Time pressure		4			4
Lack guidance	2		1		3
Product availability	1			1	2
Lack pressure to act	1	1			2
Nothing			1	1	2
Election cycle	2				2
Lack of contract management	1				1
Conflicting enviro / social factors		1			1
Total	68	67	28	15	178
Percentage of barriers	38%	38%	16%	8%	
Percentage of sample	38.7%	26.4%	19.8%	15.1%	

Table 5 Barriers across the public sector

Regarding factors perceived to be facilitators of SP practice, the evidence presented in table 6 suggests that organisational, structural and processual aspects of procurement are perceived to be playing a significant role in stimulating the development of SP

practices. In particular, the role of top management commitment, incorporating SP objectives in procurement processes and procedures, and government policy were the most frequently cited facilitators of SP practice in sample organisations.

Facilitators	General Public Services	Health	Education	Other	All
Top management support	8	4	8	3	23
Procurement processes ¹	14	4	2	3	23
Government policy	7	6	2	3	18
Other stakeholders ²	4	1	9	2	16
Legislation, & EU legislation	8	2	5	1	16
Individual commitment	5	2	4	3	14
Sustainability / CSR strategy	3	4	2	2	11
Work with suppliers	5	2	2		9
Procurement strategy	6	1		1	8
Team commitment	3	1	2	2	8
Affordable	4	2			6
Aligned with organisational goals	3	1	2		6
Awareness	3	2		1	6
Training for procurement	3	1	2		6
Guidance	5				5
ISO14000/1 / EMS	3	1			4
Procurement staff incentives	2	2			4
Availability of products	1	1			2
Government measurement	1	1			2
Nothing		2			2
Centralised support		1	1		2
Total	88	41	41	21	191
Percentage of facilitators	46%	21%	21%	11%	
Percentage of sample	38.7%	26.4%	19.8%	15.1%	
¹ Procurement processes included contractual requirements, well-thought out tender documents, pre-qualification clauses, conditions of purchase, qualifying processes, embedded procedures, developing specifications, whole life costing, invest to save, outsourcing					
² Other stakeholders included peers, facilities department, elected members, Businesses In The Community, middle management, council tax payers, students, staff					

Table 6 Facilitators across the public sector

Concerning the importance of senior management commitment, one education procurement officer commented:

“(Facilitators include) the fact that sustainability is on 'the top table' and there is a recognition from senior management that sustainability is a key issue for the future. While the impact procurement can make on the achievement of its aspirations has perhaps not yet been fully recognised, that recognition will come as the organisation pursues its objectives and ambitions in regards to sustainability.”

Further observations concerned the importance of alignment of SP with organisational goals. An education procurement officer commented:

“Procurement often doesn't, can't and maybe shouldn't lead the CSR crusade. Its implications are organisation wide and need to be championed accordingly.”

A procurement officer in the police force commented:

“(SP can be facilitated by) a real, top-down commitment to Corporate Social Responsibility where it is not incompatible with the purpose of the organisation.”

Discussion and conclusion

In this paper we have explored the current character of sustainable procurement practice in public sector organisations in the United Kingdom. Drawing upon a conceptual framework that emphasises the importance of the policy climate within which SP occurs alongside the importance of a range of organisational factors, our analysis of 106 organisations suggests that a variety of SP practices are well embedded in procurement practice. Furthermore, the particular aspects of SP that are most prevalent vary significantly across areas of the public sector. An analysis of facilitators and barriers to further development of SP suggests that financial issues are the most salient barriers to SP and organisational attributes, particularly senior management support, act as the most important facilitators.

In the context of the UK's aim of attaining a leadership position in the area of sustainable procurement in the European context by 2009, our study contributes to nascent research on sustainability in a public sector context (Günther & Scheibe, 2006; Swanson et al., 2005; Thomson et al., 2007). Although the UK's SP policy framework has only recently been published (DEFRA, 2007) and parts of the public sector have begun in turn to develop and publish their own policies (DH, 2007; Proc HE, 2007), our study suggests that a range of aspects of SP, particularly those associated with purchasing from small businesses and local suppliers, are already relatively well embedded in the UK. However, perhaps surprisingly given the focus of much of the policy on environmental aspects of SP, our evidence suggests that public sector organisations are engaging with environmentally-oriented aspects of SP to only a modest extent. Taken together, these observations suggest that while the UK is

enjoying considerable success in implementing SP, there remains much to be done to take implementation of SP further.

The study has several implications for UK and EU policy makers. It does appear that practitioners are implementing SP policy, but that there may be more of a 'buy small and local' focus and less of an environmental focus than anticipated, which may need to be addressed in future policy iterations. The focus on buying small and local may be a concern from the perspective of promotion of competition across the EU, and may suggest there is a tension between SP and competition. In health in particular, many barriers to SP have been identified by respondents, and this may be due to the particular procurement context within health, with prioritisation of patient care and clinical preference for particular products. Policy makers may need to take account of such conflicting priorities with SP in health care, and senior management in health care may need to provide greater support for procurement officers attempting to implement SP.

Our analysis is based upon a conceptual framework that suggests that 4 aspects of a particular organisation's environment may be important influences upon the implementation of SP practices: familiarity with policies, perceived inefficiencies/cost of policy, supplier availability/resistance, and organisational incentives/pressures. Among these, our analysis suggests that financial pressures are the most salient barriers to implementation of SP. The perception that buying sustainable products and services involves higher prices that cannot be accommodated in already stretched budgets, particularly in light of the imperative to deliver value for money, clearly presents a significant impediment to further spread of SP practices.

Our study is the first to systematically evaluate the character of SP in public sector organisations and, by comparison with the broad observations of previous work concerning the private sector, our analysis affords a tentative insight into the differences in practice between sectors. In contrast to our observations concerning SP in the public sector, the emphasis of earlier private sector research lies principally with environmental aspects of SP (Simpson et al., 2005; Srivastava, 2007; Svensson, 2007). Partly, this is attributable to the service-industry character of public sector organisations and the dominance of studies concerning manufacturing enterprises in

earlier research, but it is also indicative of a greater orientation to social issues among public sector organisations that is perhaps reflective of their broader remit in society.

The study had its limitations, some of which will serve as the stimulus for future work. Inherent in the survey method is the observation that only volunteers participate. This might mean that respondents are somewhat more aware of, or engaged with the sustainability agenda than non-respondents. In this regard, we note the candidness of the qualitative responses we received. A second limitation, to be addressed in the future, is the absence of structured regression analysis of public sector sustainable whereby the various influences upon an organisation's propensity to be involved in SP are evaluated simultaneously alongside each other.

Acknowledgements

We would like to thank the British Academy for sponsoring this research, all the procurement practitioners that contributed to the study, and Adele Draper for her support in administering and analysing the survey.

References

- Arrowsmith, S. 1995. Public procurement as an instrument of policy and the impact of market liberalisation. *The Law Quarterly Review*, 111(April): 235-284.
- Barney, J. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17(1): 99-120.
- Bull, G., Nilsson, S., Williams, J., Rametsteiner, E., Hammett, T., & Mabey, W. 2001. Wood procurement policy: An analysis of critical issues and stakeholders. *Forestry Chronicle*, 77(2): 325-340.
- Carter, C. R., & Jennings, M. 2004. The role of purchasing in corporate social responsibility: a structural equation analysis. *Journal of Business Logistics*, 25(1): 145-186.
- Cogburn, J. D. 2004. Achieving managerial values through green procurement? *Public Performance & Management Review*, 28(2): 236-258.
- Cox, A. 1999. Power, value and supply chain management. *Supply Chain Management: An International Journal*, 4(4): 167-175.
- Cox, A., Chicksand, D., & Ireland, P. 2005. Sub-optimality in NHS sourcing in the UK: demand-side constraints on supply-side improvement. *Public Administration*, 83(2): 367-392.
- De Bakker, F., & Nijhof, A. 2002. Responsible chain management: A capability assessment framework. *Business Strategy and the Environment*, 11(1): 63-75.
- DEFRA. 2005. Sustainable Development Strategy. London: DEFRA.

- DEFRA. 2006. Procuring the Future - The Sustainable Procurement Task Force National Action Plan. Department for Environment, Food and Rural Affairs, London.
<http://www.sustainable-development.gov.uk/publications/procurement-action-plan/documents/full-document.pdf>.
- DEFRA. 2007. Securing the future: UK Government Sustainable Procurement Action Plan Incorporating the Government response to the report of the Sustainable Procurement Task Force. London: DEFRA.
- DH. 2007. Procuring for health and sustainability 2012: sustainable procurement action plan. The health and social care sector response to the Sustainable Procurement Task Force report. Reading: Department of Health/ NHS PASA.
- Gelderman, C. J., Ghijsen, P. W., & Brugman, M. J. 2006. Public procurement and EU tendering directives - explaining non-compliance. *International Journal of Public Sector Management*, 19(7): 702-714.
- Gerrefi, G. 1999. International trade and industrial upgrading in the apparel commodity chain. *Journal of International Economics*, 48(37-70).
- Günther, E., & Scheibe, L. 2005. The hurdles analysis as an instrument for improving environmental value chain management. *Progress in Industrial Ecology - An International Journal*, 2(1): 107-131.
- Günther, E., & Scheibe, L. 2006. The hurdle analysis: a self-evaluation tool for municipalities to identify, analyse and overcome hurdles to green procurement. *Corporate Social Responsibility and Environmental Management*, 13: 61-77.
- Hall, J. 2000. Environmental supply chain dynamics. *Journal of Cleaner Production*, 8: 455-471.
- Hall, M., & Purchase, D. 2006. Building or bodging? Attitudes to sustainability in UK public sector housing construction development. *Sustainable Development*, 14(3): 205-218.
- HM Treasury. 2000. Government Accounting 2000. <http://www.Government-accounting.gov.uk>.
- Li, L., & Geiser, K. 2005. Environmentally responsible public procurement (ERPP) and its implications for integrated product policy (IPP). *Journal of Cleaner Production*, 13(7): 705-715.
- Local Government Sustainable Procurement Task Group. 2007. Local Government Sustainable Procurement Action Plan: Incorporating the Local Government Response to the Report of the Sustainable Procurement Task Force and to the UK Government Sustainable Procurement Action Plan. *Consultation draft: 30 June 2007*.
- Matthews, D., & Axelrod, S. 2004. Whole life considerations in IT procurement. *International Journal of Life Cycle Assessment*, 9(6): 344-348.
- McCrudden, C. 2004. Using public procurement to achieve social outcomes. *Natural Resources Forum*, 28(4): 257-267.
- Miles, M., & Huberman, A. 1994. *Qualitative Data Analysis: An Expanded Sourcebook* (2nd Edition ed.). Thousand Oaks CA: Sage Publications.
- Murphy, P. R., & Poist, R. F. 2003. Green perspectives and practices: a comparative logistics study. *Supply Chain Management: An International Journal*, 8(2): 122-131.
- Murray, J. G. 2000. Effects of a green purchasing strategy: the case of Belfast City Council. *Supply Chain Management: An International Journal*, 5(1): 37-44.
- OECD. 2006. OECD Factbook. Paris: OECD.

- Preston, L. E., & Donaldson, T. 1999. Stakeholder management and organizational wealth. *Academy of Management Review*, 24(4): 619-625.
- Proc HE. 2007. Corporate Social Responsibility (CSR) Group. *Procurement in Higher Education*, <http://www.proc-he.ac.uk/index/groups/csr.html>.
- Rimmington, M., Smith, J. C., & Hawkins, R. 2006. Corporate social responsibility and sustainable food procurement. *British Food Journal*, 108(10-11): 824-837.
- Sarkis, J., Meade, L., & Talluri, S. 2004. E-logistics and the natural environment. *Supply Chain Management: An International Journal*, 9(4): 303-312.
- Simpson, D. F., & Power, D. J. 2005. Use the supply relationship to develop lean and green suppliers. *Supply Chain Management: An International Journal*, 10(1): 60-68.
- Sobczak, A. 2006. Are codes of conduct in global supply chains really voluntary? From soft law regulation of labour relations to consumer law. *Business Ethics Quarterly*, 16(167-184).
- Srivastava, S. K. 2007. Green supply-chain management: A state-of-the-art literature review. *International Journal of Management Reviews*, 9(1): 53-80.
- Stonebraker, P. W., & Liao, J. 2006. Supply chain integration: exploring product and environmental contingencies. *Supply Chain Management: An International Journal*, 11(1): 34-43.
- Svensson, G. 2007. Aspects of sustainable supply chain management (SSCM): conceptual framework and empirical example. *Supply Chain Management: An International Journal*, 12(4): 262-266.
- Swanson, M., Weissman, A., Davis, G., Socolof, M. L., & Davis, K. 2005. Developing priorities for greener state government purchasing: a California case study. *Journal of Cleaner Production*, 13(7): 669-677.
- Thomson, J., & Jackson, T. 2007. Sustainable procurement in practice: Lessons from local government. *Journal of Environmental Planning & Management*, 50(3): 421-444.
- Weiss, L., & Thurbon, E. 2006. The business of buying American: Public procurement as trade strategy in the USA. *Review of International Political Economy*, 13(5): 701-724.
- Worthington, I., Ram, M., Boyal, H., & Shah, M. 2007. Researching the Drivers of Socially Responsible Purchasing: A Cross-National Study of Supplier Diversity Initiatives. *Journal of Business Ethics*, [In Press].
- WSSD. 2002. Plan of Implementation of the World Summit on Sustainable Development. New York: United Nations.

**University of Bath School of Management
Working Paper Series**

School of Management
Claverton Down
Bath
BA2 7AY
United Kingdom
Tel: +44 1225 826742
Fax: +44 1225 826473
<http://www.bath.ac.uk/management/research/papers.htm>

2006		
2006.01	Neil Allan and Louise Beer	Strategic Risk: It's all in your head
2006.02	Richard Fairchild	Does Auditor Retention increase Managerial Fraud? - The Effects of Auditor Ability and Auditor Empathy.
2006.03	Richard Fairchild	Patents and innovation - the effect of monopoly protection, competitive spillovers and sympathetic collaboration.
2006.04	Paul A. Grout and Anna Zalewska	Profitability Measures and Competition Law
2006.05	Steven McGuire	The United States, Japan and the Aerospace Industry: technological change in the shaping of a political relationship
2006.06	Richard Fairchild & Yiyuan Mai	The Strength of the Legal System, Empathetic Cooperation, and the Optimality of Strong or Weak Venture Capital Contracts
2006.07	Susanna Xin Xu, Joe Nandhakumar and Christine Harland	Enacting E-relations with Ancient Chinese Military Stratagems
2006.08	Gastón Fornés and Guillermo Cardoza	Spanish companies in Latin America: a winding road
2006.09	Paul Goodwin, Robert Fildes, Michael Lawrence and Konstantinos Nikolopoulos	The process of using a forecasting support system

2006.10	Jing-Lin Duanmu	An Integrated Approach to Ownership Choices of MNEs in China: A Case Study of Wuxi 1978-2004
2006.11	J.Robert Branston and James R. Wilson	Transmitting Democracy: A Strategic Failure Analysis of Broadcasting and the BBC
2006.12	Louise Knight & Annie Pye	Multiple Meanings of 'Network': some implications for interorganizational theory and research practice
2006.13	Svenja Tams	Self-directed Social Learning: The Role of Individual Differences
2006.14	Svenja Tams	Constructing Self-Efficacy at Work: A Person-Centered Perspective
2006.15	Robert Heath, David Brandt & Agnes Nairn	Brand relationships: strengthened by emotion, weakened by attention
2006.16	Yoonhee Tina Chang	Role of Non-Performing Loans (NPLs) and Capital Adequacy in Banking Structure and Competition
2006.17	Fotios Pasiouras	Estimating the technical and scale efficiency of Greek commercial banks: the impact of credit risk, off-balance sheet activities, and international operations
2006.18	Eleanor Lohr	Establishing the validity and legitimacy of love as a living standard of judgment through researching the relation of being and doing in the inquiry, 'How can love improve my practice?'
2006.19	Fotios Pasiouras, Chrysovalantis Gaganis & Constantin Zopounidis	Regulations, supervision approaches and acquisition likelihood in the Asian banking industry
2006.20	Robert Fildes, Paul Goodwin, Michael Lawrence & Kostas Nikolopoulos	Producing more efficient demand forecasts