



Editorial

Sustainable procurement: Past, present and future

A B S T R A C T

Sustainable procurement is increasingly on the agenda for purchasing and supply managers seeking to demonstrate corporate social responsibility in their supply chains. In this paper, we identify trends in the literature and establish that this is a burgeoning field. We identify methodological challenges and research gaps to guide future research. We propose a sustainable procurement framework to help structure future research across supply chains. Finally, we introduce each of the papers in the special issue, and identify what makes them stand out as making a novel contribution to research in the field.

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1. Introduction

Sustainable procurement can be defined as the pursuit of sustainable development objectives through the purchasing and supply process. Sustainable procurement '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'. (p.128) (Walker and Brammer, 2009). This special issue aims to bring together articles from across the spectrum of sustainable purchasing and supply chain management research, collating the latest research and thinking in the field. In this introduction we make some observations on recent developments in sustainable procurement research and consider where it might head in the future.

2. Sustainable procurement: a growing field

There appears to be growing interest in sustainable operations and more specifically supply chain management (SCM) and procurement within the academic community. This is apparent in the number of journal special issues on related topics, and more specifically the number of articles in JPSM and presented at the International Purchasing & Supply Education & Research Association (IPSEERA) conference (the main conference linked to the *Journal of Purchasing and Supply Management*). Each of these is discussed below.

There have been an increasing number of special issues on sustainable operations management, and sustainable purchasing and supply in recent years, as illustrated in Fig. 1. These have been in journals such as *Production and Operations Management*, *Journal of Operations Management*, *Supply Chain Management: an International Journal*, *Journal of Supply Chain Management*, *Journal of Cleaner Production*, and *Industrial Marketing Management* and this special issue in the *Journal of Purchasing & Supply Management*. Special issues are forthcoming in *International Journal of Production Economics*, *International Journal of Physical Distribution &*

Logistics Management, *International Journal of Operations & Production Management*, and *Decision Sciences Journal*.

This suggests that sustainable procurement is a burgeoning and current research topic, that reflects the zeitgeist of practitioner concerns. However, whereas numerous special issues focus on sustainable SCM and operations, this is the first to specifically focus on purchasing or procurement and integrate an SCM perspective, which other special issues are now emulating judging from recent calls for papers on the theme.

Along with an increasing number of special issues, there has also been an increasing number of papers published in the field of sustainable procurement, as shown in Figs. 2 and 3.

This suggests a continuing increase in the number of articles on sustainable procurement, with potentially a step change in the number of publications in 2010, with further analysis needed to identify if this growth trend will continue.

The following chart shows the number of articles published in the *Journal of Purchasing and Supply Management* since the first issue of the journal in 1994 to the middle of 2012. This reveals a steady increase in the number of articles, with a marked increase in the second decade of the journal.

The first two articles in the journal (Cooper et al., 1997; Noci, 1997) covered both the two key aspects of sustainability with the first discussing green vendor rating systems and the second discussing the Chartered Institute of Purchasing and Supply's ethics charter for buyers which includes some of the social sustainability issues. Of the total of 10 papers on sustainability since the journal's start, 7 of them deal exclusively with the natural environment dimension treating subjects ranging from green construction supply chains, reverse logistics through to green purchasing practices. This suggests a need to have research published in the social sustainability arena, and perhaps importantly, a greater focus on the linkages and trade-offs between different sustainability elements in the journal.

Fig. 4 shows the number of papers dealing with sustainable procurement at IPSEERA conferences from 1997 to 2012 (gap in

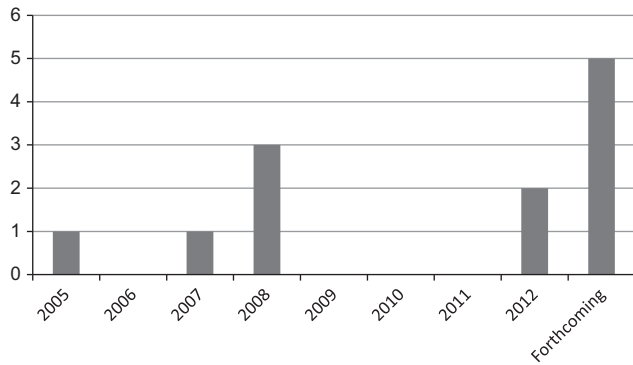


Fig. 1. Number of special issues on Sustainable P&S (2005–forthcoming).

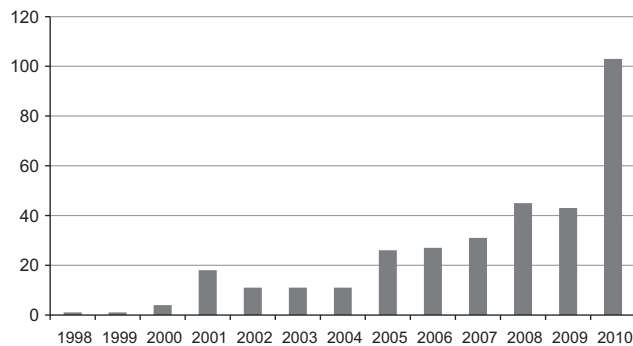


Fig. 2. Number of articles published in Sustainable procurement: an analysis of 35 journals.

Source: adapted from Walker (2012).

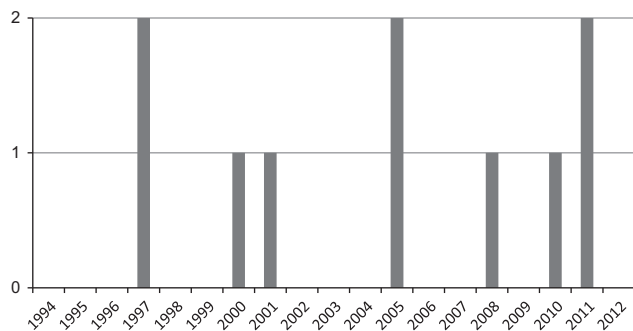


Fig. 3. Number of papers on Sustainable P&S in JPSM (1994–2012).

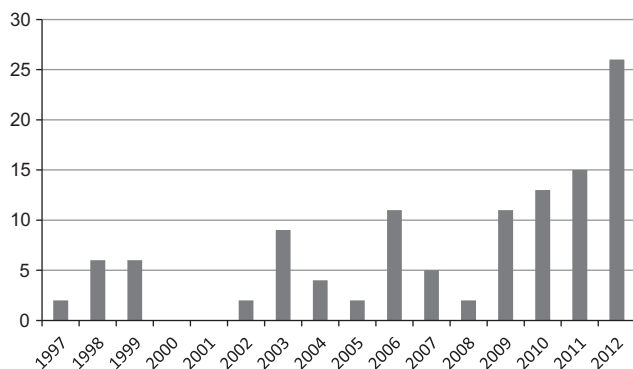


Fig. 4. Number of papers on sustainable procurement in IPSESA (1997–2012).

data for 2000). The first papers appeared at the IPSESA conference in 1997. After a couple of early papers, however, the following years showed few signs of growing interest until more recently where – especially from 2010 onwards – we see a marked increase in papers on multiple aspects of sustainability. It is clear, from this analysis, that far more papers are presented at the IPSESA conference compared with the journal, and that growth over the last 5 years shows a 2.5 times increase compared to contributions at all previous IPSESA conferences. Hence, assuming this trend continues, we expect the number of submissions related to this topic to increase significantly.

A closer look at the nature of the papers that have been presented in IPSESA reveals a greater mix of subjects covered, with a more balanced coverage of environmental/green and social purchasing and supply subjects. One possible explanation for this is that it is more straight-forward to publish papers based on constructs and measures that are well-defined and more established in the literature as is the case, for example, for environmental procurement, whereas the theoretical framework, definitions, scope and variables for social dimensions in the purchasing field is far less developed.

The Table 1 demonstrates this imbalance in measures for sustainable procurement from a recent literature review carried out by the editors of this special issue. Of a total of 330 measures (i.e. questions actually asked by researchers) analysed from 115 papers from 2000–2010 the majority covered environmental or green issues, perhaps demonstrating a greater prior interest and hence maturity in the research in this area. Of the 31% of social measures, the majority are dominated by a limited number of papers which have focused on conflict of interest, equity and ethics in the behaviour of supply professionals (Handfield and Baumer, 2006; Maignan et al., 2002). Further discussions of this research can be found in Miemczyk et al. (2012).

3. Still a way to go: challenges in sustainable procurement research

Whilst the rapid expansion of research in the field is laudable, there are still a number of methodological challenges and research gaps that we need to address.

The methodological challenges represented by sustainable procurement research are common to sustainability and corporate social responsibility research, and to supply chain research more generally. Often when asking respondents their views on sustainable procurement, whether through a questionnaire or interviews, they are often compelled to give a positive impression of their own and their organisation's activities. This is due to social desirability bias, where respondents feel a pressure to be perceived in a socially acceptable way with regard to sustainability. This may cause findings to be more positive than they are in reality. Another methodological challenge concerns the unit of analysis, and being clear about the level at which one is conducting research. Is one looking at the activities and attitudes of individual buyers, buying teams, purchasing directors, organisations, buyer–supplier dyads, along supply chains, or amongst a network of stakeholders? Further to this, if one is investigating global supply chains, there is a risk of cultural relativism. Views of sustainability are relative, and differ from individual to individual, organisation to organisation, sector to sector, and country to country (Nygren, 1998; Walker and Phillips, 2009). It may be the case, for example, that one organisation's views are being imposed along supply chains to their suppliers, consequently raising issues of power in supply chains.

If one of the outcomes of the 'supply chains of tomorrow' should be sustainability (Melnyk et al., 2010), then we need more

Table 1
Categories and sub-categories of sustainable P&S research measures (2000–2010).

Category and percentage of all measures used			
Environmental/green measures—69%		Social measures—31%	
Sub-categories	%	Sub-categories	%
Internal P&S organisational processes	33	Conflict of interest issues	24
Material, waste, recycling	26	Social equity in the supply base	19
Pollution prevention or management	9	Non/ethical behaviour	18
Cost reduction through green actions	8	Community involvement	12
Compliance & Standards	8	Compliance & Standards	9
Design for environment	4	Health & Safety initiatives	7
Energy, CO ₂ , GHG	3	Codes of practice & conduct	6
Life Cycle Assessment	3	Internal P&S organisational processes	3
Strategy formulation/development	1		100
Monitoring of the supply base	1		
Other product-related actions	1		
Risk management	<1		
	100		

research to inform practitioners of how to achieve this goal. Sustainable procurement is a nascent field, but seems to be undergoing a rapid growth period. There are a number of research gaps in the field that future research could usefully explore. Amongst the most important ones are the following:

- There is a glut of private sector manufacturing research in developed countries. More public sector, services and developing countries research would be informative.
- Future research could investigate how to balance different aspects of sustainable procurement, and the trade-offs between them.
- Understanding how individual values influence sustainability would be helpful, along with research from behavioural and psychological perspectives.
- There is an opportunity for researchers in sustainable procurement to collaborate with marketing colleagues to understand how consumers make sustainability choices, and how organisations can communicate their sustainability endeavours to consumers.
- The factors affecting the extent to which organisations engage in sustainable procurement could be better understood, along with its affect on organisational performance.
- Measures of different aspects of sustainability could be explored further, along with the metrics systems adopted by market actors.
- There is a general need for more theory building and testing in sustainable procurement, in particular theory building that challenges the dominant collaborative paradigm.

4. A sustainable procurement framework

Developing and applying different theoretical lenses through which to view sustainable procurement will help researchers and practitioners to better understand this relatively recent phenomenon. This will help us to explore the relationship between sustainable procurement and other factors, such as the influence of government pressures or management commitment on sustainable procurement implementation. We can also explore how sustainable procurement influences organisational performance, looking at environmental, financial, social and broader business measures. A number of studies have adopted established theories from Economics and Sociology to explore sustainable SCM. In

their conceptual framework of sustainable SCM, Carter and Rogers (2008) explore Resource Dependency Theory (Pfeffer and Salancik, 1978) and Population Ecology Theory (Hannan and Freeman, 1977). Vachon & Klassen (2006) adopt a Transaction Cost perspective (Williamson, 1975), and Park-Poaps and Rees (2010) adopt a stakeholder perspective (Freeman, 1984). However, adopting or developing theories is relatively rare across the articles that have been published in recent years. There is a need for more focused theory building and testing, and the development of further models and conceptual frameworks that draw closely on sustainable procurement practice, to further enhance our understanding.

Along these lines, the theories drawn upon by the authors in this special issue include stakeholder theory (Freeman, 1984), adopted by Schneider et al. and Reuter et al., agency theory (Eisenhardt, 1989) adopted by Kudla and Klaas-Wissing. Crespino-Mazet and Dantenwill explore legitimacy concepts (Suchman, 1995). Giunipero et al. review the literature to develop propositions in order to investigate supply manager's views of sustainability. The literature review by Hojmoose and Adrien-Kirby calls for more theory development and testing in the field.

With a view to further contribute towards the conceptualisation of sustainable procurement issues, we suggest the following framework for research. This incorporates on the first axis the notion of the triple bottom line of sustainability (Elkington, 1998). The second axis takes as analytical stance the choice of level of research focus, going from the individual (person) level through to the market/society level.

A possibility for developing this framework further is the adoption of a third dimension for consideration of sustainability issues taking different stages, actors, flows and activities at all points down the supply chain, from raw materials to the end of life of the product. These stages along the supply chain could go from raw materials sourcing, shipping, distribution and logistics, supplier management, buying organisation structure, processes and practices, business customers/customers' customers, intermediaries/distributors, final consumers and consumer groups, and recycling/end of life management. This third dimension (not demonstrated graphically here) is illustrated here rather via the examples provided i.e. we have populated the framework with indicative themes for research that help illuminate pertinent sustainable procurement issues at different stages in the supply chain. These are of course merely illustrative, and are in no way intended to be all-encompassing.

Table 2
A sustainable procurement framework, with illustrative examples.

Dimensions of sustainability	Level of focus				
	Individual	Organisational	Buyer–supplier dyad	Supply chain/network	Market/society/stakeholders/NGOS
Social/societal	Impact of fair trade/eco-labels on end-user buying behaviour	Integration of sustainability criteria in calls for tender	Supplier selection and qualification criteria (acceptable labour practices, etc.)	Managing/balancing the supplier portfolio	NGO practices and impact on fair trade
		CSR purchasing policies		Child labour	Government policy and standards on sustainable purchasing
		CSR functions are integrated with purchasing	Supplier training in sustainable practices	Under-paid employees in sub-tier suppliers	
Environmental	Changing end-user consumption patterns for reduced consumption of resources	Management of the Purchasing Interface with other functions (with Marketing, R and D)	Buyer and supplier collaborating to reduce packaging, CO ₂ emissions, energy and water consumption	Pollution in sub-tier suppliers	NGO impact on scarce raw materials
	Consumer awareness of environmental issues and impact on buying behaviour	Policy and practices relative to sourcing/use of restricted products (red tuna, palm oil, etc.) Environmental policy Recycling strategies	Buyer and supplier collaborating to increase resource productivity and reduce waste	CO ₂ effects across supply chain	Carbon trading practices Regulatory impacts Supplier and Buyer Government lobbying practices
Economic	Reduction in fuel consumption	Development/optimising of the sustainable purchasing function in the firm	Supplier/buyer cooperation (R & D, new product design/redesign, etc.) for cost reduction and sustainability Bribery and corruption	Innovation via design and management of the supply network (multi-partite technical collaboration, etc.) Fair price practices down the supply channel	Supporting disadvantaged sections of society through buying from SMEs, minority owned firms etc
	Qualities and characteristics of the individual members of the responsible purchasing function in the firm	Purchase vs. rent strategies and practices (e.g. retailers and consumers) Purchasing staff skills development, awareness and training	Fair profit issues		

In this way, across the three dimensions, we propose a way to frame the multiple and complex issues that arise at different supply chain points and at different levels within sustainable procurement. The papers included in this special issue each cover – simultaneously – several of the items of the three proposed dimensions (Table 2).

5. Papers in the special issue

In September 2010 Audencia Nantes School of Management held an IPSERA workshop on sustainable purchasing & supply management. The workshop targeted academics, policy makers and practitioners, and included a mixture of academic paper presentations and presentations by practitioners. We used this event as an opportunity for participants to learn about and prepare their contributions for this *Journal of Purchasing and Supply Management* special issue.

In the end we received many interesting submissions to this special issue, but unfortunately space did not permit inclusion of more than 6 articles, covering a range of sustainable procurement issues. In this special issue, we have deliberately selected a number of papers that cover a broad spectrum, thus endeavouring to show the range of approaches and issues that can be addressed when researching sustainable procurement.

The paper ‘Socially and environmentally responsible procurement: A literature review and future research agenda of a managerial issue in the 21st century’ by Stefan Hojmos and

Adam Adrien-Kirby paper sets out to explore the landscape of sustainable purchasing via a literature review of a particularly interesting kind. Taking as a starting point Key word analysis from selected elements of existing literature, the authors proceed to perform first of all bibliometric analysis, covering the period 2000–2010, to identify broad categories of research. They then continue with thematic analysis with a view to in-depth identification of theme content and subsequent exposure of gaps in the literature, but also to providing leads as to areas for further attention of consequence for managerial practice. Four main themes in the existing literature are thus identified with focus on, in particular, drivers and barriers to sustainable purchasing. As regards future research, there is a call for more emphasis being placed on theory development and testing, and at the same time highlighting the scope for comparative studies in the global market.

The paper ‘Implementing Sustainable Sourcing-Does Purchasing Need to Change?’ by Lena Schneider and Carl Marcus Wallenburg focuses on sustainable sourcing, and particularly the role of purchasing in implementing sustainable sourcing and collaboration with internal and external stakeholders. Using a literature review methodology, the authors identify that it is only very recently that definitions of sustainable sourcing have been proposed. Schneider and Wallenburg seek to operationalize the concept of sustainable sourcing, focusing on the ‘tripartite’ nature of sustainability (i.e. economic, environmental, and social sustainability). Their visual presentations of the relative focus on these three dimensions may help researchers and managers to better

understand connections and trade-offs between economic, environmental and social sustainability. Building on stakeholder theory (Freeman, 1984), the authors also investigate stakeholder salience to drive the implementation of sustainable sourcing, identifying, for example, stakeholder power, legitimacy and urgency. The authors classify the different types of stakeholders and many readers may find inspiration in the many practical examples provided of how stakeholder influence has influenced sustainable sourcing decisions. In many ways, the paper by Schneider and Wallenburg helps to set the scene and promote the agenda for sustainable sourcing and purchasing.

The paper 'Sustainability in Shipper-Logistics Service Provider Relationships: A Tentative Taxonomy Based on Agency Theory and Stimulus-Response Analysis' by Nicole Kudla and Thorsten Klaas-Wissing makes a novel contribution to the field for two reasons. The first is that one of the burgeoning concerns in supply chains is the impact of freight transportation on the environment from the view of pollution in urban areas to the wider implications of the sector's influence on carbon production and hence climate change. The paper clearly links purchasing, logistics and sustainability. The second interesting feature is the use of agency theory to provide an explanatory framework for how buyers of logistics services can influence (or not) the sustainability of such services. In general agency theory is interesting for the purchasing and supply field because it deals with contractual relations between entities, and especially helps explain how information asymmetry and goal conflicts can cause problems of agency. In this case agency theory can provide explanation is insightful, pointing to issues of goal incongruence and adverse selection.

The paper '**Purchasing and Supply Management Sustainability: Drivers and Barriers**' by Larry Giunipero, Robert Hooker and Diane Denslow reports on a Delphi study into drivers and barriers of sustainable purchasing and supply management in the US. Their paper tracks developments in the sustainability literature since the 1960s and positions sustainable supply management within the wider sustainability agenda. The authors develop their own definition of sustainable supply management and identify drivers and barriers of sustainable supply management within existing literature. The Delphi study provides insights into management perceptions of these drivers and barriers and point to the importance of top management vision and support and regulatory compliance as important drivers, and high initial buyer and supplier investment costs as important barrier, especially within a tough economic climate.

The paper '**The Impact of Stakeholder Orientation on Sustainable and Economic Prevalence in Supplier Selection**' by Carsten Reuter, Philipp Goebel, and Kai Foerstl addresses the fact that the purchasing function, when implementing a sustainable purchasing strategy, is faced with the dilemma of arbitrating between traditional economic cost considerations and non-economic considerations of a sustainable nature. This paper uses data taken from a multi-industry empirical study via purchasing managers from German-based multinationals to investigate the direct and indirect effects that stakeholders such as shareholders, NGOs, and customers, have in terms of pressure applied when performing a particularly important task: choosing new suppliers. It investigates the role that ethical culture plays as a mediator in this process, thus putting stakeholders and supplier choice criteria into context. Statistical analysis of the data demonstrates that emphasis on sustainability criteria in supplier selection, for example, translates as less emphasis on cost criteria. At the same time public orientation (governments and community) positively impact adoption of sustainable criteria. On the other hand customer orientation has a negative effect. These findings, along with the authors' proposed explanatory factors, should contribute in helping firms better understand the forces at play and

inhibiting factors involved in the pursuit of sustainable purchasing strategy, whilst at the same time providing food for thought as regards future research.

The paper '**Sustainable procurement: building legitimacy through the supply network**' by Florence Crespin-Mazet and Emmanuelle Dontenwill provides an in depth case study of a gardening product distribution and retail organization looking to integrate sustainability into its procurement activities. The paper specifically takes an Industrial Marketing perspective, and thus a wider network view of the problem. As wider networks are seen to include stakeholders other than direct customers and suppliers, this paper explores the role of purchasing in engaging NGOs in the development and implementation of their sustainable procurement strategy, and the wider role of this strategy on the firm's overall sustainability actions. In particular the paper focuses on the process of building legitimacy, a key factor in sustainability strategy. They propose that "the firm's legitimacy in sustainable development is positively related with the level of legitimacy of the actors forming its supply network", which is an interesting approach because it links to the view of firms being part of and also dependent on wider networks. The authors utilize an action research methodology, as active participants, as well as observers in the process of developing their sustainable procurement strategy.

6. Conclusions

A sustainable SCM workshop was held at Cardiff in June 2012^a. It was attended by over 70 academics and Ph.D. students. At the workshop, Professor Joseph Sarkis commented on the 'healthy' state of the field, despite the economic recession. It seems from the increasing number of special issues and publications in the field, that interest is continuing to grow in the topic from academics and practitioners alike. Whether this topic proves to have an enduring interest or is a passing fad, only time will tell.

We feel that this article, and this special issue in the *Journal of Purchasing and Supply Management* makes a useful contribution to the development of knowledge in the field, and speaks to current interests and concerns. We have identified methodological challenges and gaps in the literature to guide future research. Our understanding of sustainable procurement and what it encompasses will broaden over time, and we have offered a framework or "map of the sustainable procurement world" to consider sustainable procurement issues at different levels in the supply chain. We look forward to the progress to be made in practice and research in sustainable procurement in the future.

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Guest editors

Helen Walker
*Chair of Operations and Supply Management,
 Logistics and Operations Management Section,
 Cardiff Business School, Cardiff University,
 Colum Drive, Cardiff, CF10 3EU
 E-mail address: WalkerHL@cardiff.ac.uk*

Joe Miemićzyk
*Associate Professor of Operations and Supply Chain Management,
 Audencia Nantes School of Management, PRES L'UNAM, 8,
 route de la Jonelière, B.P. 31222 44312 Nantes Cedex 3, France
 E-mail address: jmiemićzyk@audencia.com*

Thomas Johnsen
*Professor of Purchasing and Supply Management,
 Audencia Nantes School of Management, PRES L'UNAM, 8,
 route de la Jonelière, B.P. 31222 44312 Nantes Cedex 3, France
 E-mail address: tjohnsen@audencia.com*

Robert Spencer
*Chair in Sustainable Sourcing, Professor in Industrial Marketing and
 Purchasing Euromed Management, School of Management,
 BP 921, Marseille, 13288 Cedex 9, France
 E-mail address: Robert.Spencer@euromed-management.com*