

**SUSTAINABLE PROCUREMENT: EMERGING ISSUES**

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**ABSTRACT.** Sustainable procurement is the pursuit of sustainable development objectives (WCED, 1987) through the purchasing and supply process, and involves balancing environmental, social and economic objectives. It is rising on the policy agenda for many countries, but knowledge remains limited. This study explores emerging issues through focus groups at a sustainable procurement workshop. The 44 participants included senior policy makers, academics, and practitioners from public and private sector and professional bodies. Focus group discussion data were taped and analyzed. Four sustainable procurement themes were explored: (1) Moving from an environmental focus to social and economic dimensions; (2) Sustainability and innovation; (3) Ethical supply and (4) Measurement issues. Findings seek to inform academic and practitioner debate on sustainable procurement.

**INTRODUCTION**

In recent years, academics and practitioners have become increasingly interested in how organizations and their suppliers impact on the environment, society and the economy. There is a prevailing view that there needs to be some constraint in economic and societal development, to minimize negative impacts on the environment. In addition to environmental considerations, organizations can choose suppliers to redress imbalances in society (e.g. buying from domestic

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minority-owned small businesses) and globally (e.g. choosing suppliers in developing countries). The strategic role of purchasing and supply as a lever for sustainable development is manifested in an increasing prevalence of research on responsible purchasing and supply, a greater policy onus on green and sustainable procurement in the public sector, and moves to improve the environmental and social performance of firms and their supply chains in the private sector.

Research, policy and practice is developing apace in this field, and this research seeks to make a contribution by exploring emerging issues with 44 academics and practitioners from the private and public sector in focus groups at a workshop. In order to conduct exploratory thematic research, prior to the workshop the authors consulted with two academic and two practitioner experts to identify key challenges important to the advancement of sustainable procurement. These themes were (1) Moving from an environmental focus to social and economic objectives (2) Sustainability and innovation (3) Ethical supply issues and (4) Measuring the impacts of sustainable supply.

In this paper, literature related to each theme is considered. The method for data collection is then set out, describing focus group discussions at the sustainable procurement workshop. The findings are then presented, followed by discussion of the themes and how our findings relate to the literature. We conclude with consideration of the implications of the research for research, policy and practice.

## **LITERATURE REVIEW**

In order to explore emerging issues in sustainable procurement, literature relating to the four themes explored in the workshop is presented below. First, the balance of environmental, social and economic sustainable procurement research is discussed, with the majority of research being conducted in the environmental arena. Emerging research trends such as a move from predominantly private to public sector research are discussed. Following this, sustainability and innovation are discussed, and how sustainable supply can be seen as intimately linked with the pursuit of innovation. Ethical supply issues are then discussed, followed by consideration of how sustainable supply can be measured.

### **Moving from environmental focus**

Sustainable procurement is a phrase that does not occur frequently in academic literature, but has a variety of related terms, including green supply (Bowen, Cousins, Lamming, & Faruk, 2001a, 2001b), green purchasing (Chen, 2005; Min & Galle, 2001; Ochoa, Fuhr, & Gunther, 2003), green purchasing strategies (Min & Galle, 1997), green purchasing and supply policies (Green, Morton, & New, 1998), environmental purchasing (Carter & Carter, 1998; Carter, Ellram, & Ready, 1998; Carter, Kale, & Grimm, 2000; Legarth, 2001; Murray & Cupples, 2001; Zsidisin & Siferd, 2001), environmental supply chain management (Lamming & Hampson, 1996; Narasimhan & Carter, 1998), green supply chains (Klassen & Johnson, 2004; Rao & Holt, 2005; Walton, Handfield, & Melnyk, 1998), green value chains (Handfield, Walton, Seegers, & Melnyk, 1997), green supply chain management (Sarkis, 2003; Zhu, Sarkis, & Geng, 2005) and environmental supplier performance (Humphreys, McIvor, & Chan, 2003; Noci, 1997).

The above studies have focused on environmental issues, with social and economic objectives only receiving attention more recently. Research has investigated 'linkage between public procurement and social outcomes' (McCrudden, 2004) and reflecting increasing interest in corporate social responsibility, research has explored purchasing social responsibility (Carter, 2005; Carter & Jennings, 2002) and socially responsible buying (Drumwright, 1994; Maignan, Hillebrand, & Mcalister, 2002) and sourcing (Henkle, 2005).

The majority of sustainable supply research has been conducted in the private sector. However, the role of public procurement in greening purchasing and supply has increasingly been investigated (Kunzlik, 2003; Li & Geiser, 2005; Swanson, Weissman, Davis, Socolof, & Davis, 2005). The relationship between public procurement and social issues (McCrudden, 2004) has been considered. Sustainable supply issues have also been researched from an international perspective (Carter et al., 1998; Kaufmann & Carter, In Press; Knight, Caldwell, Harland, & Telgen, 2004; Ochoa et al., 2003; Walker, 2006).

Sustainable development research has also increased in prevalence in the Supply and Operations field, with special issues of journals on the subject (Leopold-Wildburger, Weber, & Zachariasen, 2006; Wilkinson, Hill, & Gollan, 2001). Researchers have investigated sustainable supply network management (Young & Kielkiewicz-Young, 2001), sustainable

consumption (Lovins & Lovins, 2001) sustainable food chains (Ilbery & Maye, 2005), sustainable development in business strategy (Lamming, Faruk, & Cousins, 1999) and sustainable procurement (Walker, 2006; Walker, Bakker, Knight, Gough, & McBain, 2006).

In this paper we use the term 'sustainable procurement', although in this research we sought the views of both public and private sector practitioners. Sustainable procurement is about not just how to *buy* but how to *supply* sustainably, so we see different perspectives on the process as essential.

### **Sustainability and innovation**

Sustainability and innovation, or how innovation relates to sustainable development, can be differentiated from sustainable innovation, keeping up a continuous rate of innovation. Both are of course important in supply markets, but our focus here is on the former rather than the latter.

The 'Porter hypothesis' (Porter & Van de Linde, 1995) proposes that the view that environmental regulation erodes competitiveness is outdated. The authors suggest properly designed environmental standards can trigger innovations that lower the total cost of a product or improve its value. Examples are given of the Dutch flower industry, which innovated and lowered environmental impact and costs, and improved product quality and global competitiveness

Porter's hypothesis is strongly opposed (Walley & Whitehead, 1994), disagreeing with the notion of a 'win-win' solution. In contrast, they underline the high costs associated with implementing environmental technologies and the lack of any real economic payback. Acknowledging the existence of the win-win solution, they point out that it is rare and suggest the goal should be to develop a strategy that internalises the external costs brought about by environmental pressures. To do so managers must adopt a value approach, carrying out 'trade-offs' between the cost of responding to environmental issues against the benefits

By adopting the conventional concept of value, Walley and Whitehead return to the traditional notion of the environment as a zero-cost good. They also fail to take into account the role of other actors, such as consumers, the public and NGOs, in driving and shaping the strategic response of the firm. A growing band of literature has endorsed

the view of 'sustainable technological regimes or paradigms' (Green & Miles, 1996; Kemp, 1994), growing pressures from consumers and environmentalists driving firms towards the development of more environmentally-conscious technology strategies. Technologies can be perceived as being social constructions which tend to be produced in response to perceived market opportunities (Green & Miles, 1996). Environmental technologies differ in so much that they are not essentially driven by consumer preferences but by legislation and government regulations, policies and practices (Environmental Protection Agency, 1994).

Few studies highlight the systemic nature of innovation and how this may shape both the strategic decisions of the firm and the political decisions of the policy-makers. The *socio-economic* dimension in influencing the direction of technological change has been highlighted (Kemp, 1994), whereby technology has been subject to evolutionary improvements not only in terms of cost, but also in terms of the socio-economic environment, for example accumulated knowledge, changes in capital outlays and alterations to existing regulations.

The influence of NGOs and consumers must not be overlooked, few firms 'go green' simply in response to public pressure (Economic Social Research Council, 1999) although a wide range of socio-economic pressures may encourage firms to become 'greener' e.g. cost, shareholders, consumers, trade associations and pressure groups. In addition, organisations may wish to be seen in a positive light, emphasizing their commitment to the environment and sustainability.

Consequently, although past studies into sustainability and innovation have viewed the firm's response as a linear process whereby the firm reacts by developing or introducing a new or existing technology, it is clearly a far more systemic process, going beyond the relationship between environmental regulation and innovation, to include additional actors or stakeholders (Phillips, 2000). As Kay points out relevant factors should be seen within a framework of the firm's internal architecture, external architecture and network relationships (Kay, 1993). Government procurement policies can also play a significant role in encouraging the development of new processes or products, with public expenditure exceeding 50 per cent of GDP in some OECD countries (OECD, 2006) it can have a significant influence on technological development.

### **Ethical supply issues**

Ethical supply chains have been the subject of theorizing and discussion (New, 2004). Set in a broader context, concern with ethical supply chain issues arises from increased interest in both the theory and practice of corporate social responsibility (CSR) and business ethics. Writers have discussed the responsibilities of businesses to society (Whetten, Rands, & Godfrey, 2002), giving a historical overview of the emergence of CSR. In common with sustainable development, the 'triple bottom line concept' (Elkington, 1998) lies at the heart of CSR. This is about measuring a company's performance with respect to economic prosperity, environmental quality and social justice.

The conservative economist Milton Friedman (Friedman, 1962, 1970) argued that the proper social responsibility of business is to focus on wealth creation, and to leave other social institutions to solve social problems; the responsibility of business was considered to be maximizing profits and shareholder value. In the 1990s, attention turned to stakeholders, people and groups affected by business activity beyond shareholders (Freeman, 1984). Increasingly there is a recognition that business organizations must participate in society in an ethically symbiotic way (Chancellor, 2002; Joyner & Payne, 2002).

One issue that emerges in supply chain research is *ethical to whom?* Cultural relativism argues there are few universally common ethical principles (England, 1975). Instead, values and ethical behaviour vary across cultures (Ferrell & Gresham, 1985; Hunt & Vitell, 1986; Razzaque & Hwee, 2002; Robertson & Crittenden, 2003). Some studies have focused on *unethical* behaviour in supply chains such as taking kickbacks (Turner, Taylor, & Hartley, 1994). Research has also investigated corruption from the supply and demand side (i.e. those who make vs. those who demand and accept corrupt payments) (Beets, 2005), and in emerging economies such as Slovakia (Zemanovicova, 2002).

The ethical behaviour and attitudes of purchasing managers has been investigated (Carter, 2000), in some instances finding ethical differences across countries such as the US, Korea and Japan (Dubinsky, Jolson, Kotabe, & Lim, 1991) and between India, the US, the UK and Canada (Cooper, Frank, & Kemp, 2000) and in other research not finding differences between purchasing managers in Mexico, Spain and the US (Husted, Dozier, McMahan, & Kattan, 1996). Other professional groups have been studied in ethical supply, such as engineers whose ethical

choices affect the environmental impact of products and processes they design and / or manage (Beamon, 2005).

Research has investigated the 'patchy' success of ethical sourcing (Roberts, 2003), being better in some sectors than others. Varying levels of commitment to ethical sourcing strategy have been observed amongst UK food and clothing retailers, influencing approaches to social auditing in the supply chain (Hughes, 2005). Pressure for improvement from end-consumers can be exerted back up the supply chain; a CSR 'ripple effect' has been described which operates up and down the supply chain (Strandberg, 2002). Recently there has been consumer-led interest in fair trade products such as coffee (Levi & Linton, 2003), and research has explored the possibility of fair trade as a strategy for international competitiveness (Welford, Meaton, & Young, 2003).

### **Measurement issues**

Whatever sustainable supply initiatives are implemented, it is necessary to assess whether the initiatives have had desired impacts. Some studies have focused on assessing the environmental performance of suppliers (Handfield, Walton, Sroufe, & Melnyk, 2002; Humphreys et al., 2003; Noci, 1997). Research has also investigated whether a firm's environmental performance is improved by green supply policies (Green et al., 1998), green supply chain management (Zhu et al., 2005) and green production or manufacturing (Curkovic, 2003; King & Lennox, 2001).

Research has also drawn links between firm performance a variety of aspects of sustainable supply. Studies have investigated the relationship between firm performance and the following: environmental performance (Wagner, Schaltegger, & Wehrmeyer, 2001), environmental supply performance (Carter et al., 2000; Rao & Holt, 2005; Russo & Fouts, 1997), environmental management (Klassen & McLaughlin, 1996; Melnyk, Sroufe, & Calantone, 2003), corporate social responsibility (McWilliams & Siegel, 2000) and purchasing social responsibility (Carter, 2005).

Organisations are increasingly reporting their environmental, social and economic performance as well as financial performance, such as in response to the Global Reporting Initiative, or in financial indices such as the FTSE4Good and the Dow Jones Sustainability Index. These voluntary initiatives have been criticized as only organizations who

behave responsibly are likely to participate (Page, 1980), or those that wish to *appear* so, with criticism of 'green window dressing' as a PR exercise for firms (Cowe, 2004; United Nations Research Institute for Social Development, 2000). Such ways of measuring sustainability are of limited relevance to sustainable supply as that is not their sole focus.

What appears to be missing is consideration of how to measure the broader environmental, social and economic impacts of sustainable supply initiatives. Also, how can the assessor be sure the impacts (positive or negative) are due to their initiative rather than other factors? This research seeks to explore measurement issues and the other three themes in more depth.

## METHOD

In November 2005 the authors organized a workshop to explore sustainable procurement issues with a diverse group of participants. The workshop included presentations from academic and practitioners followed by group activities that explored the impact of purchasing and supply upon sustainable development. The discussion aimed to promote discussion and cross-sectoral learning, and gave an opportunity for data collection.

The 44 participants were diverse and included 2 senior policy makers from central government, 15 supply practitioners from the public sector and 11 supply practitioners from the private sector, 9 academics and 7 postgraduate (PhD and Masters) students studying purchasing and supply.

Participants were allocated into four groups, with the authors aiming to achieve a mix of practitioners and academics. Each group participated in a facilitated discussion on a specific theme. The group facilitators were the authors and two of the guest speakers. Group discussion data was recorded on flipchart and audio tape, and later transcribed. The groups were asked to give their top three challenges relating to the theme, and write them on post-it notes, which were then grouped into clusters to identify common challenges. The groups then debated how to overcome these challenges. A member of the group fed back the discussion in a plenary session. At the end of the workshop, 'burning issues' identified by participants throughout the day were captured on flipcharts.



The data from the flipcharts, post-its and group discussion transcripts were analyzed to identify key challenges discussed by each group, and how they might be overcome. Transcripts of the discussion were coded, and examples that illustrated particular points were identified, whilst ensuring the anonymity of participants.

### FINDINGS

Each theme was discussed by a separate focus group, and issues identified by participants were clustered within groups into key challenges and how to overcome them. Table 1 summarizes findings for the theme of 'Moving from an environmental focus to social and economic objectives'. Participant discussion focused on several issues: why there has been a focus on environmental issues in the past, how to

**TABLE 1**  
**Moving from an environmental focus: challenges and how to overcome**

<i>Moving from environmental focus</i>			
No	Issue	Challenges	How overcome
1.1	Why focus on environment in past	Environment more tangible Lobbying groups raised environment profile Individual can make more direct decisions on environmental products	Educate public about how what buy can influence social and economic Lobbying on social and economic issues
1.2	Environmental to social and economic objectives	Easier to understand environmental indicators e.g. CO2 emissions More environmental regulation	Raise awareness of social and economic indicators More law on social issues beyond International Labour Organisation guidelines
1.3	Competing objectives	Cost is main objective in procurement	Promotion of how to achieve savings and sustainability

1.4	Government commitment and the political agenda	<p>Bigger SD agenda not sold to public procurement practitioners</p> <p>Need commitment from Treasury otherwise wasting time</p> <p>Political influence of big suppliers is barrier</p> <p>Four government departments have ownership of waste. Too much fractured activity in public sector</p>	<p>Need education for procurement practitioners</p> <p>Need senior government commitment</p> <p>Supplier relationship management with key suppliers</p> <p>Need greater co-ordination across public sector</p>
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move from environmental to social and economic objectives, competing objectives, and government commitment and the political agenda.

Rather than go into the specific challenges and how they might be overcome, the data for each theme is presented in Tables 1-4, and then common elements to the four thematic debates are presented in Table 5, in order to identify potential areas of action for research, policy and practice.

Table 2 summarizes findings for the theme of ‘Sustainability and Innovation’. Participant discussion focused on the following issues: culture, top level buy-in and training, short-termism and resources.

**TABLE 2**  
**Sustainable innovation: challenges and how to overcome**

<i>Sustainability and innovation</i>			
No	Issue	Challenges	How overcome
2.1	Culture	<p>Risk averse</p> <p>Blame culture</p> <p>Conservative</p> <p>Silos</p>	<p>Young blood – adapts readily to change?</p> <p>Mixture of cultures/diversity</p> <p>Closer interaction within units</p> <p>Introduce ‘churn’, job rotation</p> <p>Supportive processes</p> <p>Secondments</p> <p>Maximise potential – pick credible people</p> <p>Sharing of exemplar practices</p> <p>Sustainability – a key goal</p>

2.2	Top level buy-in & training	Through top level buy-in to promote training Clear directions from the bottom level Learning as opposed to teaching Recreate value through innovation	Need senior management commitment Need novel approaches to training – impact of the individual Need to identify ways of engaging the non-converted Separate budget for sustainability and training Stability – time to work on strategies and policies
2.3	Short-termism	Shareholder value Driven by big suppliers	Sustainability on corporate agenda More ethical shareholders Raised awareness Diversity – different approaches arise Publicise the ‘success’ stories – cases, how to do it Courage to fail and kill off failing projects.
2.4	Resources	Lack of time, budget, resources	Create time and resources Commitment Create expectations Realistic goals Break down subject External pressure

Table 3 summarizes findings for the theme of ‘Ethical supply’. Participant discussion focused on several issues: what is ethical supply, eco-systems and diversity, implementation and changing the system / mindset.

**TABLE 3**  
**Ethical supply issues: challenges and how to overcome**

<i>Ethical supply</i>			
No	Issue	Challenges	How overcome
3.1	What is ethical supply?	No one definition of ethical supply in a culturally diverse world Impose western northern hemisphere values	Keep awareness of relative ethics

3.2	Ecosystems / biodiversity	Security of supply	Reduce biodiversity impact in supply chain Increase monitoring of how supply chains impact on eco systems
3.3	Implementation	How to implement / monitor / police / incentivise Carrot vs stick effectiveness	Consider how far along supply chain responsibility extends – first tier? Second? Audit supply chain to ensure compliance Monitor misbehaviour Regulation Policing of supply chains
3.4	Changing the system / mindset	Moving towards ethical supply	Identify key supply chains at ethical risk Legal procedures and financial risks if unethical Educate consumers and producers against exploitation Raise awareness that purchasers can make ethical choices

Table 4 summarizes findings for the theme of ‘Measurement’. Participant discussion focused on several issues: indicators in general, waste, energy efficient buildings, transport and emissions, health and sustainable supply structures.

**TABLE 4**  
**Measurement issues: challenges and how to overcome**

<i>Measurement</i>			
No	Issue	Challenges	How overcome
4.1	Indicators in general	Too many indicators	Focus on 5 key indicators given below
4.2	Waste	Disposal costs Landfill has finite availability Outsourced services – lose control of waste	Waste reduction targets Recycling targets Include waste reduction criteria in outsourced contracts Increase use of waste as fuel (Used fuel) Encourage recipient markets for waste

4.3	Energy efficient buildings	Energy wasted in many buildings Construction process produces waste Paint toxicity	Reductions in energy consumption Reductions in water usage Reduce scrap on construction sites Rethink waste – 3M has zero waste policy Measure waste by volume or by value? Source alternative paints
4.4	Transport and emissions	CO2 emissions Unnecessary miles travelled	Reduce miles per year using road, rail, air Increase walk/cycle to work schemes Increase number of energy efficient vehicles Calculate carbon off-setting Increase availability and usage of video and teleconferencing
4.5	Health	Improving health of the population Improve health along supply chains	Measures of health loss / gain Life expectancy (years) of population Health and safety measures of suppliers, especially in developing countries (e.g. reduce number of accidents)
4.6	Sustainable supply structures	Concern over offshoring practices Continuity of supply, medium to long term Spend with local suppliers	Vendor assessment measures Work with suppliers in developing countries Reduce consumption Increase resource productivity Source raw materials from different countries Increase spend with local suppliers

Looking across the four thematic discussions, several common themes emerge, which are presented in Table 5, along with the source in Tables 4. These include educating the public and consumers, education of purchasing and supply practitioners, sharing best practice, government and senior management commitment and cultural change, regulation and legislation, and working with suppliers.

**TABLE 5**  
**Common issues and sources**

<i>Common issues</i>	<i>Source (Tables 1-4)</i>
Educate public, consumers	1.1, 2.3, 3.4
Educate purchasing and supply practitioners	1.2, 1.3, 1.4, 2.2, 2.4
Share best practice	1.3, 2.3
Government commitment	1.4, 1.1
Senior management commitment, cultural change	2.1, 2.2, 2.3, 2.4
Regulation and legislation	1.2, 3.3, 3.4
Work with suppliers – encourage recipient markets, SRM, educate suppliers, SMEs, include sustainable criteria in contracts, assess suppliers, identify sustainable supply risks, investigate alternate sourcing	1.4, 3.4, 4.6, 4.5, 4.3, 4.6, 4.2

At the end of the workshop, ‘burning issues’ identified by participants throughout the day were captured on flipcharts. These centred around 4 themes:

- *competing objectives* – value for money, competition, corporate and economic performance, efficiency agenda, incentivisation, manage and measure
- *public vs private sector* – duplicity of concerns, differing pressures and approaches, can the public sector learn from private sector
- *sustainability transcending party politics* – three party collaboration, exchange, a shared approach, opportunity to leapfrog the political agenda
- *harnessing the potential of individuals* – personal vs corporate attitudes and values, empowerment, personal responsibility, creating a learning network, engaging champions at wider level

## DISCUSSION

This research sought to explore themes associated with sustainable procurement. Findings are reflected on in the light of the literature.

In considering *moving from an environmental focus*, it is apparent that the majority of research has been conducted on green and

environmental supply issues (Bowen et al., 2001b; Chen, 2005; Min & Galle, 2001; Rao & Holt, 2005) as opposed to social or economic dimensions of sustainable procurement. There seems to be little debate of why environmental issues have taken precedence; this research suggests it may have arisen out of lobby groups such as Greenpeace raising the profile of environmental issues in the 1970s. Also, the environment is more 'tangible' and individuals can make more direct decisions at home and in their jobs on the environmentally friendly products they buy. Suggestions for moving from environmental to social and economic objectives include educating the public on socially responsibly products so changes in supply are consumer-led (Strandberg, 2002), along with NGOs lobbying on social and economic issues. This is happening in the international supply arena with trade justice movements such as Fair Trade, Make poverty history, Action aid, World development movement, and War on Want, which are all aimed at buying from suppliers in developing countries and redressing the wealth / poverty imbalance between developed and developing countries. However, lobbying for domestic social and economic issues is more contentious in the UK, with campaigns such as 'Buy British' being perceived as economic protectionism in the context of the single European market (Smith, 2001).

Past studies into *sustainability and innovation* have viewed the firm's response as a linear process whereby the firm reacts by developing or introducing a new or existing technology (Porter & Van de Linde, 1995; Walley & Whitehead, 1994). However, it appears to be a far more systemic process, going beyond the relationship between environmental regulation and innovation, to include additional actors or stakeholders (Phillips, 2000). Our research suggests that employees have an important role to play in supporting sustainability and innovation, to overcome a risk averse culture and short-termism. Senior management commitment is needed, along with training, time and resources.

Participants discussed the importance of consumers and ethical stakeholders. Sustainable consumption tends to be centred on the final household consumer, ignoring industrial consumption and public procurement (Green & Miles, 1996). Government procurement and industrial supply chains also play an important role and can have a major impact upon the firm's approach towards sustainability and innovation.

With regard to *ethical supply*, the literature suggests that values and ethical behaviour vary across cultures (Ferrell & Gresham, 1985; Robertson & Crittenden, 2003); the participants of this study discussed the issue of cultural relativism in the context of sustainable procurement and ethical supply. One participant argued that:

*“Sustainable procurement is a Western or Northern Hemisphere concern. If you live in a developing country and are struggling to put food on the table, the health and safety conditions in your factory or the environmental harm done in the manufacturing process are pretty irrelevant.”*

Suggestions of how to promote ethical supply included raising awareness that purchasers can make ethical choices, consideration of how far along the supply chain ethical responsibility extends, educating consumers and producers on ethical issues, identifying key supply chains most at risk, and regulation and policing of supply chains to ensure compliance.

*Measurement issues* in sustainable procurement has been researched often in relation to firm performance (Rao & Holt, 2005) and mainly focused on environmental performance indicators (Curkovic, 2003; Handfield et al., 2002; Zhu et al., 2005), with the exception of studies investigating purchasing social responsibility (Carter, 2005; Carter & Jennings, 2002). In this study, participants suggested there are too many indicators in general, and agreed on five key measurement issues, three of which have an environmental focus; waste, energy efficient buildings, transport and emissions, health and sustainable supply structures. Suggestions were made of specific indicators for each area. Social and economic indicators were thought to need greater promotion.

Turning to the *common issues* identified across the focus groups, and *burning issues* identified at the end of the workshop, a common theme seems to be harnessing the potential of the individual. This includes empowerment, personal responsibility, and educating the public and consumers. Research has investigated the ‘green consumer’, suggesting they account for roughly 20% of the population (Nicholls & Opal, 2005; Thøgersen & Olander, 2002), although there is a significant gap between consumers’ claimed attitudes to sustainable consumption and their actual behaviour. The power of the consumer has been researched in a CSR and environmental context (Economic Social Research Council, 1999; Green & Miles, 1996; Strandberg, 2002). The public can exert



considerable pressure on firms through influence on the legislative process, their power as consumers and also through the risk of lawsuits. The increasing availability of organic food in supermarkets is a clear demonstration of green consumerism. However, research into consumer behaviour has shown that the isolated nature of everyday activities such as shopping and driving leads the consumer to believe that he/she has little impact, both politically and commercially, upon today's environmental issues (Economic Social Research Council, 1999). Furthermore, lack of faith in government and profit-driven organisations means consumers need to be convinced by action rather than words.

Our findings corroborate calls for increased training for purchasing and supply practitioners in previous studies (Bowen et al., 2001b; Carter & Dresner, 2001) and from policy makers (Helm, Billiald, Harrison, & Cavanagh, 2005). Our study also reaffirms the need for senior management commitment (Drumwright, 1994; Klassen, 2001), and for cultural change (Wycherley, 1999) and participation throughout the organization (Carter & Ellram, 1998; Hanna, Newman, & Johnson, 2000). Firm attitude is important, such as proactivism with environmental issues (Cordeiro & Sarkis, 1997; Gonzalez-Benito & Gonzalez-Benito, 2005).

In our research, senior government commitment was debated along with sustainability transcending party politics; participants discussed cross-party agreements on sustainability as an option to demonstrate commitment whichever party is in power, as already occurs in Holland. The need for joined up working across government was also apparent. The issue of regulation and legislation was debated; previous studies have found that regulation can incentivise environmental performance in particular industries (Porter & Van de Linde, 1995).

The majority of sustainable supply research has been conducted in the private sector, although studies are emerging in the public sector (Kunzlik, 2003; Li & Geiser, 2005; McCrudden, 2004; Swanson et al., 2005). Participants debated duplicity of concerns in the public and private sectors, differing pressures and approaches, and whether the public sector might learn from the private sector. It has been suggested that sustainable procurement is one of several objectives in a 'policy landscape' (Walker, 2006). Participants observed that supplies practitioners were tasked with competing objectives, such as achieving value for money, competition, corporate and economic performance, the

efficiency agenda, incentivisation, and how to manage and measure sustainable supply. Depending on whether in the public or private sector, promoting and sharing compelling cases of achieving sustainability and value for money / savings / profits through the procurement process would assist practitioners in seeing how to achieve multiple objectives.

Several studies have identified the need to work with suppliers in pursuit of sustainable supply, and our study reaffirmed the need to assess suppliers (Handfield et al., 2002; Noci, 1997), consider alternate sourcing (Henkle, 2005; Kamann & Bakker, 2004), incorporate environmental criteria in the contracting process (Faith-Ell, Balfors, & Folkesson, 2005; Kunzlik, 2003) and encourage markets (Kunzlik, 2003).

## CONCLUSIONS

This research investigated emerging issues in sustainable procurement, focusing on four themes: (1) Moving from an environmental focus to social and economic objectives, (2) Sustainability and innovation, (3) Ethical supply issues and (4) Measurement issues.

This research has several implications for sustainable procurement policy. Senior government commitment is needed to ensure practitioners are empowered to purchase responsibly. In addition, having sustainable procurement measures included in annual reporting forms would give a clear message that public procurement is expected to deliver on this agenda. Regulation and legislation can promote sustainable supply practices. Public promotion of environmentally, ethically and socially responsible buying also seems important in encouraging consumer-led responses in supply markets. Finally, political parties may consider cross-party agreement on the sustainability agenda to prevent short-termism.

Implications for practice include awareness of the systemic nature of sustainability and innovation; many stakeholders such as consumers, regulators, pressure groups can influence how firms innovate in response to the sustainability agenda. Senior management commitment and cultural change may enable sustainable supply practices. Suggestions for sustainable supply practices include: educating suppliers, working with SMEs, including sustainability criteria in contracts, vendor assessment, identifying sustainable supply risks, investigating alternate sourcing and

working with suppliers to encourage innovative responses to sustainability in supply markets.

For researchers in the field, there seems much scope to expand on theories relating to the social and economic elements of sustainable procurement. There is a small but growing literature on ethical supply, and research exploring cultural relativism in the context of sustainable procurement would be of value, particularly investigating the balance of domestic and international sustainable procurement. Systemic views of sustainability and innovation can further be explored, and the measurement of sustainable procurement impacts requires research.

The workshop succeeded in bringing together a range of different stakeholders interested in sustainable procurement. The aim is to establish a learning network of practitioners and academics, and communication on sustainable procurement has continued with the group. For example, a group of participants were asked to participate in piloting a sustainable procurement questionnaire for circulation across the public sector, which will provide further data to inform theory and practice in sustainable procurement.

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### REFERENCES

- Beamon, B. M. (2005). Environmental and sustainability ethics in supply chain management. *Science and Engineering Ethics*, 11(2), 221-234.
- Beets, S. D. (2005). Understanding the demand-side issues of international corruption. *Journal of Business Ethics*, 57(1), 65-81.

- Bowen, F., Cousins, P., Lamming, R., & Faruk, A. (2001a). Horses for Courses: explaining the gap between the theory and practice of green supply. *Greener Management International*, 35(Autumn), 41-60.
- Bowen, F., Cousins, P., Lamming, R., & Faruk, A. (2001b). The Role of Supply Management Capabilities in Green Supply. *Production and Operations Management*, 10(2), 174-189.
- Carter, C. R. (2000). Ethical issues in international buyer-supplier relationships: a dyadic examination. *Journal of Operations Management*, 18, 191-208.
- Carter, C. R. (2005). Purchasing social responsibility and firm performance. *International Journal of Physical Distribution & Logistics Management*, 35(3), 177-194.
- Carter, C. R., & Carter, J. R. (1998). Inter-organizational determinants of environmental purchasing: Initial evidence from the consumer products industries. *Decision Sciences*, 29(3), 659-684.
- Carter, C. R., & Dresner, M. (2001). Purchasing's Role in Environmental Management: Cross-Functional Development of Grounded Theory. *Supply Chain Management*, 37(3), 12-26.
- Carter, C. R., & Ellram, L. M. (1998). Reverse Logistics: A Review of the Literature and Framework for Future Investigation. *International Journal of Purchasing and Materials Management*, 34(4), 28-38.
- Carter, C. R., Ellram, L. M., & Ready, K. (1998). Environmental Purchasing: Benchmarking our German Counterparts. *International Journal of Purchasing and Materials Management*, 34(4), 28-38.
- Carter, C. R., & Jennings, M. M. (2002). Social responsibility and supply chain relationships. *Transportation Research Part E: Logistics and Transportation Review*, 38(1), 37-52.
- Carter, C. R., Kale, R., & Grimm, C. M. (2000). Environmental purchasing and firm performance: an empirical investigation. *Transportation Research Part E: Logistics and Transportation Review*, 36(3), 219-228.
- Chancellor, E. (2002). Perverse incentives. *Prospect*, June, 28-33.
- Chen, C. C. (2005). Incorporating green purchasing into the frame of ISO 14000. *Journal of Cleaner Production*, 13(9), 927-933.

- Cooper, R., Frank, G., & Kemp, R. (2000). A multinational comparison of key ethical issues, helps and challenges in the Purchasing and Supply Management profession: the key implications for business and the professions. *Journal of Business Ethics*, 23, 83-100.
- Cordeiro, J., & Sarkis, J. (1997). Environmental proactivism and firm performance: evidence from security analyst earnings forecasts. *Business Strategy and the Environment*, 6(2), 104-114.
- Cowe, R. (2004, 14 March). DTI attacks boardroom greenwash. *The Observer*, p. 8.
- Curkovic, S. (2003). Environmentally Responsible Manufacturing: The development and validation of a measurement model. *European Journal of Operational Research*, 146(1), 130-155.
- Drumwright, M. (1994). Socially Responsible Organisational Buying: Environmental Concern as a Non-economic Buying Criteria. *Journal of Marketing*, 58(July), 1-19.
- Dubinsky, A., Jolson, M., Kotabe, M., & Lim, C. (1991). A cross-cultural investigation of industrial salespeople's ethical perceptions. *Journal of International Business Studies*, 22(4), 651-670.
- Economic Social Research Council. (1999). *Global Environmental Change Programme*: Web page: [www.gecko.ac.uk/](http://www.gecko.ac.uk/).
- Elkington, J. (1998). *Cannibals with forks: the triple bottom line of 21st century business*. London: John Wiley and Sons.
- England, G. (1975). *The Manager and his Values: an International Perspective*. Cambridge: Ballinger Publishing.
- Environmental Protection Agency. (1994). *Technology Strategy of the U.S. EPA External Discussion Draft*. [http://es.inel.gov/program/regional/epa/itc\\_tis1.html](http://es.inel.gov/program/regional/epa/itc_tis1.html).
- Faith-Ell, C., Balfors, B., & Folkesson, L. (2005). The application of environmental requirements in Swedish road maintenance contracts. *Journal of Cleaner Production*, In Press: corrected proof, available online 19 January 2005.
- Ferrell, O., & Gresham, L. (1985). A contingency framework for understanding ethical decision-making in marketing. *Journal of Marketing*, 49(Summer), 87-96.

- Freeman, R. E. (1984). *Strategic management: a stakeholder approach*. Marshfield, MA.: Pitman.
- Friedman, M. (1962). *Capitalism and freedom*. Chicago: University of Chicago Press.
- Friedman, M. (1970). The social responsibility of business is to increase profit. *New York Times Magazine*.
- Gonzalez-Benito, J., & Gonzalez-Benito, O. (2005). Environmental proactivity and business performance: an empirical analysis. *Omega International Journal of Management Science*, 33(1), 1-15.
- Green, K., & Miles, I. (1996). A Clean Break. In R. Welford & R. Starkey (Eds.), *Business and the Environment*. London: Earthscan.
- Green, K., Morton, B., & New, S. (1998). Green purchasing and supply policies: do they improve companies' environmental performance? *Supply Chain Management*, 3(2), 89-95.
- Handfield, R., Walton, S. V., Seegers, L. K., & Melnyk, S. A. (1997). Green value chain practices in the furniture industry. *Journal of Operations Management*, 15(4), 293-315.
- Handfield, R., Walton, S. V., Sroufe, R., & Melnyk, S. A. (2002). Applying environmental criteria to supplier assessment: A study in the application of the Analytical Hierarchy Process. *European Journal of Operational Research*, 141(1), 70-87.
- Hanna, M. D., Newman, W. R., & Johnson, P. (2000). Linking operational and environmental improvement through employee involvement. *International Journal of Operations & Production Management*, 20(2), 148-165.
- Helm, L., Billiald, S., Harrison, K., & Cavanagh, J. (2005). *Sustainable procurement in central government*. London: National Audit Office.
- Henkle, D. (2005). GAP Inc. sees supplier ownership of compliance with workplace standards as an essential element of socially responsible sourcing. *Journal of Organizational Excellence*, 7-25.
- Hughes, A. (2005). Corporate strategy and the management of ethical trade: the case of the UK food and clothing retailers. *Environment and Planning A*, 37(7), 1145-1163.

- Humphreys, P., McIvor, R., & Chan, F. (2003). Using case-based reasoning to evaluate supplier environmental management performance. *Expert Systems with Applications*, 25(2), 141-153.
- Hunt, S., & Vitell, S. (1986). A general theory of marketing ethics. *Journal of Macromarketing*, 8, 5-16.
- Husted, B., Dozier, J., McMahon, J., & Kattan, M. (1996). The impact of cross-national carriers of business ethics on attitudes about questionable practices and form of moral reasoning. *Journal of International Business Studies*, 27(2), 391-411.
- Ilbery, B., & Maye, D. (2005). Food supply chains and sustainability: evidence from specialist food producers in the Scottish/English borders. *Land Use Policy*, 22(331-334).
- Joyner, B., & Payne, D. (2002). Evolution and implementation: a study of values, business ethics and corporate social responsibility. *Journal of Business Ethics*, 41, 297-311.
- Kamann, D.-J., & Bakker, E. F. (2004). Changing supplier selection and relationship practices: a contagion process. *Journal of Purchasing and Supply Management*, 10, 55-64.
- Kaufmann, L., & Carter, C. R. (In Press). International supply relationships and non-financial performance—A comparison of U.S. and German practices. *Journal of Operations Management*, .
- Kay, J. (1993). *Foundations of Corporate Success: How Business Strategies Add Value*. Oxford: Oxford University Press.
- Kemp, R. (1994). Energy Technologies and Technological Paradigms. In R. Kemp & et al (Eds.), *Technology and the Transition to Environmental Sustainability: Continuity and Change in Technological Systems*. Maastricht: CEC.
- King, A. A., & Lennox, M. J. (2001). Lean and green? An empirical examination of the relationship between lean production and environmental performance. *Production and Operations Management*, 10(3), 244-256.
- Klassen, R. D. (2001). Plant-level environmental management orientation: The influence of management views and plant characteristics. *Production and Operations Management*, 10(3), 257-275.

- Klassen, R. D., & Johnson, P. F. (2004). The green supply chain. In S. New & R. Westbrook (Eds.), *Understanding Supply Chains: Concepts, Critiques and Futures*. Oxford: Oxford University Press.
- Klassen, R. D., & McLaughlin, C. P. (1996). The impact of environmental management on firm performance. *Management Science*, 42(8), 1199-1214.
- Knight, L., Caldwell, N. D., Harland, C., & Telgen, J. (2004). *Government Reform and Public Procurement - report from the first International Research Study on Public Procurement*. Bath, UK: Centre for Research in Strategic Purchasing and Supply, University of Bath.
- Kunzlik, P. (2003). Making the market work for the environment: Acceptance of (some) 'green' contract award criteria in public procurement. *Journal of Environmental Law*, 15(2), 175-201.
- Lamming, R., Faruk, A., & Cousins, P. (1999). Environmental soundness: a pragmatic alternative to expectations of sustainable development in business strategy. *Business Strategy and the Environment*, 8(3), 177-188.
- Lamming, R., & Hampson, J. (1996). The environment as a supply chain management issue. *British Journal of Management*, 7(Special Issue), S45-S62.
- Legarth, J. B. (2001). Internet Assisted Environmental Purchasing. *Corporate Environmental Strategy*, 8(3), 269-274.
- Leopold-Wildburger, U., Weber, G., & Zachariasen, M. (2006). Call for papers: Special Issue on OR for Better Management of Sustainable Development. *European Journal of Operational Research*, Forthcoming 2007.
- Levi, M., & Linton, A. (2003). Fair trade: A cup at a time? *Politics & Society*, 31(3), 407-432.
- 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.
- Lovins, L. H., & Lovins, A. B. (2001). *Natural capitalism: path to sustainability?* Denver, Colorado: Rocky Mountain Institute.



- Maignan, I., Hillebrand, B., & Mcalister, D. (2002). Managing socially-responsible buying: how to integrate noneconomic criteria into the purchasing process,. *European Management Journal*, 20(6), 641-648.
- McCrudden, C. (2004). Using public procurement to achieve social outcomes. *Natural Resources Forum*, 28(4), 257-267.
- McWilliams, A., & Siegel, D. (2000). Corporate social responsibility and financial performance: correlation or misspecification? *Strategic Management Journal*, 21(5), 603-609.
- Melnyk, S., Sroufe, R., & Calantone, R. (2003). Assessing the impact of environmental management systems on corporate and environmental performance. *Journal of Operations Management*, 21(3), 329-351.
- Min, H., & Galle, W. P. (1997). Green purchasing strategies: trends and implications. *International Journal of Purchasing and Materials Management*, 33(3), 10-17.
- Min, H., & Galle, W. P. (2001). Green Purchasing Practices of US firms. *International Journal of Operations & Production Management*, 21(9), 1222-1238.
- Murray, J. G., & Cupples, V. E. (2001). Environmental purchasing: tools of engagement. In A. Erridge, R. Fee & J. McIlroy (Eds.), *Best Practice Procurement: Public and Private Sector Perspectives*. Aldershot: Gower Press.
- Narasimhan, R., & Carter, J. (1998). *Environmental Supply Chain Management*. Tempe, AZ.: Center for Advanced Purchasing Studies.
- New, S. (2004). The Ethical Supply Chain. In S. New & R. Westbrook (Eds.), *Understanding supply chains: concepts, critiques and futures*. Oxford: Oxford University Press.
- Nicholls, A., & Opal, C. (2005). *Fair Trade*. London: Sage.
- Noci, G. (1997). Designing 'green' vendor rating systems for the assessment of a supplier's environmental performance. *European Journal of Purchasing & Supply Management*, 3(2), 103-114.
- Ochoa, A., Fuhr, V., & Gunther, D. (2003). Green purchasing in practice: experiences and new approaches from the pioneer countries. In C. Erdmenger (Ed.), *Buying into the Environment*. Sheffield: Greenleaf Publishing.

- OECD. (2006). *OECD Factbook*. Paris: OECD.
- Page, A. C. (1980). Self-regulation and codes of practice. *Journal of Business Law*, 24(1), 28-39.
- Phillips, W. E. (2000). *The Creation of Capabilities and the Emergence of Strategy - the case of Environmental Regulation and Pilkington Plc.*, University of Manchester, Manchester.
- Porter, M. E., & Van de Linde, C. (1995). Green and competitive. *Harvard Business Review*, September - October, 120-134.
- Rao, P., & Holt, D. (2005). Do green supply chains lead to competitiveness and economic performance? *International Journal of Operations & Production Management*, 25(9-10), 898-916.
- Razzaque, M., & Hwee, T. (2002). Ethics and purchasing dilemma: a Singaporean View. *Journal of Business Ethics*, 35, 307-326.
- Roberts, S. (2003). Supply chain specific? Understanding the patchy success of ethical sourcing initiatives. *Journal of Business Ethics*, 44, 159-170.
- Robertson, C. J., & Crittenden, W. F. (2003). Mapping moral philosophies: Strategic implications for multinational firms. *Strategic Management Journal*, 24(4), 385-392.
- Russo, M., & Fouts, P. (1997). A resource-based perspective on corporate environmental performance and profitability. *Academy of Management Journal*, 40(3), 534-559.
- Sarkis, J. (2003). A strategic decision framework for green supply chain management. *Journal of Cleaner Production*, 11(4), 397-409.
- Smith, M. P. (2001). In pursuit of selective liberalization: single market competition and its limits. *Journal of European Public Policy*, 8(4), 519-540.
- Strandberg, C. (2002). *The Future of Corporate Social Responsibility*. Vancouver: VanCity Credit Union.
- 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.

- Thøgersen, J., & Olander, F. (2002). Human Values and the Emergence of a Sustainable Consumption Pattern. *Journal of Economic Psychology, 23*, 605-630.
- Turner, G., Taylor, G., & Hartley, M. (1994). Ethics policies and gratuity acceptance by purchasers. *International Journal of Purchasing and Materials Management, 30*(3), 43-47.
- United Nations Research Institute for Social Development. (2000). *Promoting socially responsible business in developing countries: The potential limits of voluntary initiatives*. New York: UNRISD.
- Wagner, M., Schaltegger, S., & Wehrmeyer, W. (2001). The relationship between the environmental and economic performance of firms: What does theory propose and what does empirical evidence tell us? *GMI, 34*, 95-108.
- Walker, H. (2006). *Sustainable procurement: the development of a conceptual framework*. Paper presented at the American Academy of Management Conference, Atlanta, Georgia, USA.
- Walker, H., Bakker, E., Knight, L., Gough, S., & McBain, D. (2006). *Sustainable procurement in the English National Health Service: learning and practice*. Paper presented at the International Purchasing and Supply Education and Research Association, San Diego, USA.
- Walley, N., & Whitehead, B. (1994). It's Not Easy Being Green. *Harvard Business Review, 72*(3), 46-52.
- Walton, S., Handfield, R., & Melnyk, S. (1998). The green supply chain: integrating suppliers into environmental management processes. *International Journal of Purchasing and Materials Management, 3*(2), 2-11.
- WCED. (1987). *World Commission on Environment and Development*. Oxford: Oxford University Press.
- Welford, R., Meaton, J., & Young, W. (2003). Fair trade as a strategy for international competitiveness. *International Journal of Sustainable Development and World Ecology, 10*(1), 1-13.
- Whetten, D. A., Rands, G., & Godfrey, P. (2002). What are the responsibilities of business to society? In A. Pettigrew, H. Thomas &

- R. Whittington (Eds.), *Handbook of Strategy and Management* (pp. 373-408). London: Sage.
- Wilkinson, A., Hill, M., & Gollan, P. (2001). The sustainability debate. *International Journal of Operations & Production Management*, 21(12), 1492-1502.
- Wycherley, I. (1999). Greening Supply Chains: The Case of the Body Shop International. *Business Strategy and the Environment*, 8, 120-127.
- Young, A., & Kielkiewicz-Young, A. (2001). Sustainable Supply Network Management. *Corporate Environmental Strategy*, 8(3), 260-268.
- Zemanovicova, D. (2002). Economic aspects of corruption. *Ekonomicky Casopis*, 50(2), 182-196.
- Zhu, Q. H., Sarkis, J., & Geng, Y. (2005). Green supply chain management in China: Pressures, practices and performance. *International Journal of Operations & Production Management*, 25(5-6), 449-468.
- Zsidisin, G. A., & Siferd, S. P. (2001). Environmental purchasing: a framework for theory development. *European Journal of Purchasing and Supply Management*, 7(1), 61-73.