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Green Procurement in the private sector: a state of the art review between 1996 and 2013



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ABSTRACT

The purpose of this paper is to identify the main themes of Green Procurement (GP) in the private sector through a literature review of papers published between 1996 and 2013 and to develop some future research directions. GP research has garnered interest from academics and industry alike. This is demonstrated by the increasing number of academic papers published in recent years. This literature review builds on the three themes in the adoption of GP identified from the literature: 1) the motivation and drivers for the implementation of GP; 2) barriers to the implementation of GP; 3) the performance impacts of the adoption of GP. Given that there are distinctive features of the private sector, compared to the public sector, this analysis focuses on GP in the private sector. The approach to GP holds important implications for managers, by directing limited resources towards projects which intersect both environmental performance and economic performance. The article discusses interesting findings, develops a conceptual framework of GP and suggests a number of directions for future research.

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1. Introduction

1.1. Relevance of Green Procurement

Over the years the purchasing function has evolved towards being more strategic due to a growing trend for focusing on core activities while outsourcing most of the non-core ones (Giunipero et al., 2006; Lawson et al., 2009). Such an approach is shifting a large part of the manufacturing activities outside the company boundary and the purchasing function contributes to an increasing impact on the natural environment (Zsidisin and Siferd, 2001). Purchasing serves as a boundary-spanning function within firms and provides an advantageous position based upon which a firm can coordinate a chain of activities to apprise its suppliers from an environmental point of view so as to create conditions for the subsequent activities being green (Enarsson, 1998).

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The procurement function opens up an important opportunity for integrating environmental aspects into all processes and all units of a company, and contributes to a reduction of the environmental impact caused by business actions. Purchasing therefore is potentially a more powerful agent of change than any other corporate function (Green et al., 1998; Zsidisin and Hendrick, 1998; Preuss, 2001).

In recent years, interest in the cross-disciplinary area of GP research (used interchangeably with green purchasing, environmental purchasing, sustainable sourcing and supply management) continues to grow in both academia and industry. This is driven mainly by environmental and financial performance in response to competitive, regulatory and community pressures. However, it appears that environmental commitment could be not only a result of regulatory compliance but a source of competitive advantage for a firm (Carter et al., 2000).

Various researchers examine the positive effect of green and environmental purchasing as a possible instrument that reduces sources of waste and promotes recycling and other environmental benefits (Handfield et al., 1997; Carter and Carter, 1998; Bowen et al., 2001a,b; Min and Galle, 2001; Klassen and Vachon, 2003; Guenther et al., 2010). As procurement progresses towards a more green approach, it contains the potential for integrating environmental aspects into a company's decision making; GP may

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allow senior management to cope with their environmental responsibilities as far as the impact on the whole supply chain is concerned (Guenther et al., 2010). For example, the effect might be greater in the case that one of the leading companies within a supply chain applies GP, thus influencing its suppliers. In the process of increasing their own environmental responsibility, leading firms can also increase the environmental consciousness of other companies within their supply chains.

1.2. Definitions of Green Procurement

Different authors have provided several definitions of GP and have used different terminologies, such as environmental procurement or purchasing. Furthermore, while the notion of "green purchasing" or "GP" is circulating, nobody has outlined it in depth and specified the notion of "greenness" as related to suppliers (Nagel, 2003).

In a recent work, Large and Thomsen (2011) define environmental or green purchasing as an integration of environmental considerations into purchasing policies, programmes, and actions. Green, or environmental purchasing, is the involvement of the purchasing function in supply chain management activities such as life-cycle analysis (LCA) and environment design that facilitates recycling, reuse and resource reduction (Carter and Carter, 1998; Carter et al., 1998).

An holistic definition is presented by Zsidisin and Siferd (2001: 69) as "Environmental purchasing for an individual firm is the set of purchasing policies held, actions taken, and relationships formed in response to concerns associated with the natural environment. These concerns relate to the acquisition of raw materials, including supplier selection, evaluation and development; suppliers' operations; inbound distribution; packaging; recycling; reuse; resource reduction; and final disposal of the firm's products."

It can be seen that definitions provided by Zsidisin and Siferd (2001) and Large and Thomsen (2011) are similar, while that of Carter et al. (1998) is out of date as it is narrowed down to technical issue such as recycling and LCA. In this study, we adopt Large and Thomsen (2011) definition because its expression is simple and less specific, and therefore more open for new themes to emerge.

1.3. Literature reviews on green supply chain management

While there is, in general, abundant literature on various aspects and facets of green management due to growing interest, particularly in the last decade, there are still some areas that need further research. In particular, while abundant literature exists on green supply chain management (SCM), the considerations and evidences specifically related to GP are much less developed. Among the review and conceptual papers identified in the related search, only five that attempt to review part of the GP literature were found; each of these is discussed below to justify why this review has been carried out.

Zsidisin and Siferd (2001) is the only literature review devoted specifically to GP; it reviews and synthesizes several common themes found in the literature stream and proposes a theoretical direction for future research in environmental purchasing. However, as there has been a surge of research since 2001 and the practice has been fast evolving, it is worthwhile conducting another review regarding the new themes and practices that have emerged on this topic.

Seuring and Müller (2008) offer a literature review on sustainable SCM based on 191 papers and a conceptual framework to summarize the main research in this field, but green purchasing is only a small part of their review.

Carter and Rogers (2008) perform an extensive literature review and use a conceptual theory building approach to propose the concept of sustainability in the field of SCM and demonstrate the relationships between environmental, social and economic performance within an SCM context, but do not touch on other aspects of GP

A recent review by Sarkis et al. (2011) categorizes and reviews green SCM literature under nine broad organizational theories, with special emphasis on the investigation of the adoption, diffusion and outcomes of green supply chain management practices but, again, procurement is a small part of their review.

Miemczyk et al. (2012) review focused on the definition and measures of sustainable supply management, including both environmental and social aspects of sustainability. Its scope is broader than ours as it includes both social and environmental aspects and investigates three levels of dyad, chain and network based on 73 publications and a selected list of journals. Our review is more focused and we search more broadly in the databases.

In this study, we have conducted a comprehensive literature review which aims to collect and analyze all relevant papers in the field of GP by means of a structured search of the literature from 1996 to 2013 in order to synthesize the major common themes found in this literature, by proposing a conceptual framework capturing related research, and also proposing a number of future research directions.

2. Research method

This paper seeks to provide a rigorous, critical analysis of the state-of-the-art research into GP. A systematic literature review would seem to be a valid approach, as it is a necessary step in structuring a research field and forms an integral part of any research conducted (Easterby-Smith et al., 2002); and in "providing collective insights through theoretical synthesis into fields and subfields" Tranfield et al., 2003: 220). Fink (2005) also argues that a research literature review is a systematic and reproducible design for identifying and evaluating an existing body of scholarly works.

The literature analyzed here comprises peer-reviewed English language papers, which are focused on GP during the time period from 1996 to 2013. This starting point represents the beginning of the debate on GP in the literature (e.g. Lamming and Hampson, 1996; Green et al., 1996). Those articles with a broader focus on green SCM, were only considered if they had a particular focus on GP.

The keywords used for the selection of articles are: "GP"; "Green Purchas*"; "Sustainable Procurement"; "Sustainable Purchas*"; "Ethical Procurement"; "Environmental Procurement"; plus "NOT Public Procurement", in the title or in the abstract.

Purchas* (purchasing and purchase) has been included as it is used by several authors with a very similar meaning to procurement. Environmental has been included as it is synonymous with green within this analysis. Moreover, given that green management issues are often related to broader themes such as sustainability and ethics, we initially included these two keywords. However, during the progress of our analysis we have focused on articles that were dealing specifically with or had a significant part of them devoted to GP.

Given the specificities and policy implications of green public procurement, and the fact that this topic has already been widely analyzed in the literature, we shall restrict our analysis to GP as carried out in the private sector.

As in Seuring and Müller (2008) major databases were searched, i.e., those provided by major publishers — Scopus, Emerald (www.emeraldinsight.com), Springer (www.springerlink.com) and Ebsco (www.ebsco.com). As we found a great degree of duplication

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