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ANALYSIS

Environmental criteria in the public purchases above the EU threshold values by three Nordic countries: 2003 and 2005

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ABSTRACT

Green Public Procurement (GPP) has been considered as an important policy instrument in the context of sustainable consumption and production. The state and progress of GPP has earlier been measured by questionnaires and interviews, both methods being based on the assessment by the purchaser, and questionnaires having low response rates. Recently, a new method was developed, analyzing the existence of environmental criteria in the calls for tenders. However, the studies have dealt neither with the progress in GPP, nor the statistical evidence of differences between countries. Our aim was to analyze more thoroughly whether the differences in the proportions of 'green' calls for tenders between the three Nordic countries, Denmark, Finland and Sweden, in 2003 and 2005 were real, and whether there had occurred any progress between the years concerned. The paper also presents the 'GPP-record' method, which enables more valid measurement of the environmental soundness of public purchasing. The statistical analyses were done using logit models with country, year and product group as the explanatory factors. It proved to be relevant to take into account the variation that occurred from the random existence of product groups in the samples of calls for tender. There were less environmental criteria in the calls for tenders in Finland than in Denmark and Sweden in 2003, but in 2005 no significant difference between Finland and Denmark was observed. Both Finland and Sweden saw progress in this area between 2003 and 2005.

1. Introduction

Green public procurement (GPP) means that purchasing agencies take into account the environmental aspects when purchasing goods, services or works. GPP, as a subset of sustainable procurement, is considered as one of the key policies that could be used to promote the change of unsustainable patterns of consumption and production (Tukker et al., 2008; Clark, 2007; European Commission, 2007). The large volume of public purchases, covering 14–16% of the EU gross domestic product (European Commission, 2003, p. 9), implies that there are expectations for GPP as a tool for creating a market for ecological products and services (Larsen and Svane, 2005; European Commission, 2007). Greening the public procurement processes would have both short-term and long-term effects, decreasing rapidly e.g., energy use in the public sector, and at the same time affecting product design and the environmental characteristics of goods and services in the

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long run (Swanson et al., 2005; Parikka-Alhola, 2008). For example, over 2.8 million desktop computers are purchased each year by the EU, and the purchasing of more energy efficient models could reduce European green house gas emissions by over 830000 tonnes CO_2 equivalents. Another impressive example is the public purchasing of green electricity, which could contribute towards one quarter of the European Kyoto commitments if it came from newly constructed renewable energy facilities (ICLEI, 2003).

The most rapid progress in GPP has been seen in this decennium, although many state organizations and municipalities have considered environmental aspects of their purchases since the late 1980s, especially after the Conference of United Nations in Rio de Janeiro in 1992. The preparation of new purchase directives in the EU between 2001 and 2004 fostered active debate regarding the possibility to use environmental grounds in public purchasing, and also the Organization for Economic Co-operation and Development provided a recommendation on GPP in 2002 (OECD, 2002). In the USA, the program of Environmentally Preferable Purchasing (EPP) has guided public purchasers since 1993 (US Environmental Protection Agency, 2006). Another example (among many) is offered by Japan (Erdmenger et al., 2001) where the government adopted the first "Action Plan for the Greening of Government Operations" in 1995. This plan set objectives and indicated the methods required to achieve a greening of public procurement by the year 2000.

In the EU, *The Green Paper on Integrated Product Policy* (*IPP*) was published in 2001 and raised interest towards product-oriented environmental focus (European Commission, 2003). The aim of IPP is to reduce the environmental impacts of products throughout their life-cycle, taking into consideration also the market and competitiveness concerns (European Commission, 2003, p. 6). Increased demand for greener products by GPP, in competition with the more traditional products, is well suited to this market oriented approach of IPP. Environmentally responsible public procurement can also be seen as a driving force in the integration of environmental product policy instruments (Li and Geiser, 2005). IPP also emphasizes that public authorities must act as 'leaders' in the process of green management and 'in changes of consumption towards greener products' (Bala et al., 2008, see also: Kunzlik, 2003). In summer 2008, EU Commission published the action plan on sustainable consumption and production, focusing on the key policy instruments developed in IPP (European Commission, 2008). GPP is one of these key tools.

GPP plays a key role in many other policy initiatives in the EU and national level, e.g., the climate change policies and the Environmental Technologies Action plans (European Council, 2006; Mogens, 2006). At the EU level, one of the latest interests has emerged from the use of public demand as a promoter for innovation (Edler and Georghiou, 2007). In September 2006, the EU Commission issued a paper of innovation strategy, highlighting the importance of public procurement in innovations and the creation of leading market, especially in sectors where the public authority is a significant purchaser (European Commission, 2006). A research collecting all innovations commercialized in Finland between 1984 and 1998 shows that 48% of the projects leading to successful innovation were induced by public procurement or regulation (Palmberg, 2004 cited in Edler and Georgihiou, 2007). The power of public procurement has been well recognized in the EU, and the member states were expected to present their action plans for GPP by the end of the year 2006. Also the Nordic Council of Ministers (NCM) has stressed the importance of GPP in the strategy for sustainable development and has initiated co-ordination efforts so that public buyers in all Nordic countries can benefit from each other's experience (Nordic Council of Ministers, 2004a).

The EU directives concerning public procurement were renewed in 2004. According to the directives the purchase decision can be based on the lowest price or the most economical advantageousness from the point of view of the contracting entity (Directive, 2002/17/EC). 'Most economically advantageous' tender is the one that best fulfills the numerous criteria set by the purchaser. These criteria may relate to price, other costs, quality, aesthetic features, technical capability, etc. that are linked to the subject-matter of the contract. The directives explicitly state that environmental characteristics can be among these criteria (Directives, 2004/18/EC and 2004/17/EC). The question of what can be considered good or acceptable from an ecological point of view is also a matter of scientific understanding of the environmental impact of goods or services purchased (Larsen and Svane, 2005). The purchases may use, but are not obliged to use appropriate specifications that are defined in eco-labels, such as the European Eco-label, national eco-labels or any other eco-label, provided on the basis of scientific information (Directive, 2004/17/EC).

Environmental criteria can be specified as obligatory technical specifications for the product or service, e.g., material selection, chemical content and characteristics of products, etc., or they can be used as award criteria. Environmental performance demands, i.e., aspects that are handled in e.g., environmental management system, quality system or similar, can be presented as qualifications of contractors (i.e., qualitative selection criteria). Environmental criteria can also be indicated already in the definition of the contract, e.g., 'energy saving lamps'. They can also be present in the contract clauses, e.g., demanding the recycling or reuse service during the contract period (2004/17/EC and 2004/18/EC).

During the last few years, Internet tools have become the most important instrument in many countries to deliver environmental information to purchasers, side-by-side with the work to develop environmental criteria for various product groups (Johnstone, 2001; Bouwer et al., 2005). EU Commission has published a guidebook in several languages (European Commission, 2004), and national guidebooks have also been published, e.g., in Finland a guidebook was published in 2004, taking into account the new EU legislation (Nissinen, 2004). Two brochures for leaders in the public sector as well as purchasers were produced and distributed in Finland, Norway and Sweden in April 2004 (Nordic Council of Ministers, 2004b). It is evident that Internet-tools, guidebooks and other GPP information tools have helped the setting of environmental criteria in tender documents during the last few years (see e.g., Tazelaar, 2008; Clark, 2007).

Regarding scientific analyses, the greening of supply chain operations in companies have been focused by several authors (e.g., Carter, 2005; Humphreys et al., 2003; New et al., 2002;