'If a road tanker crashes on the M6 and it is a chemical, it is all over the papers... Chemicals are emotive, and I think the chemical industry is aware of that.'

Purchasing manager, pigments and dyes manufacturer

The purchasing and supply function in manufacturing companies, generally speaking, does not match its growing importance to company profitability with an equally strategic contribution to environmental protection. The majority of companies were found to exclude the environment when assessing their suppliers. Where environmental initiatives are undertaken in the supply base, an arm’s-length approach dominates and the emphasis is more on greening products than on supplier manufacturing processes. The individual managers show some awareness of environmental challenges, but their activities concentrate on packaging and waste. While undoubtedly of some environmental importance, from a life-cycle perspective packaging and waste are quite peripheral.

However, some industries – electronics, chemicals, automotive and paper-making – stand out, as they present clusters of more comprehensive environmental initiatives in the supply chain (see also Green et al., 1996; Hill, 1997; Russel, 1998; Theyel, 2001). Hence the following sections will discuss examples of environmental initiatives in the supply chains of electronics, chemical and paper companies1 to examine why these industries place greater emphasis than others on environmental protection, what enabling factors and sources of constraint there are, and last but not least, whether these industries contain any examples of a green multiplier effect.

L. Preuss, The Green Multiplier
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Electronics

Electronics is an industry with a significant number of examples for environmental initiatives in the supply chain covering a wide range of activities (Trowbridge, 2001). Electronics is characterised by a great diversity of products, ranging from simple pocket calculators to complex industrial automation systems and new-generation computers. The industry is dominated by large corporations, often with their headquarters in the USA and Japan, which have set up offshore assembly operations in newly industrialised countries. Suppliers also vary in size, from large corporations to small local suppliers. A relatively recent development is the emergence of contract manufacturers, which make a product to the specifications of a branded customer; the product is then marketed under the brand name, not the name of its manufacturer. Generally, the industry is of a dynamic nature, though companies such as IBM or Microsoft have been able to achieve dominance over their markets. Electronics has experienced a high degree of government involvement, because of the impact the resource information can have on national competitiveness, social welfare and national defence.

The environmental impact of electronics manufacturers is as varied as the industry’s products. Of particular importance are hazardous substances, such as heavy metals. These are only used in small quantities per product, but the large total number of products none the less makes them a considerable source of environmental damage. Another concern centres around the use of solvents in the cleaning of printed circuit boards. The industry also produces general environmental problems – for example, packaging and waste. Electronics is one of the industries where manufacturers generally tend to include the environment in their supplier assessment criteria. An electronic and electric goods manufacturer introduced a ‘Green Procurement Standards Guide’ in 2000. The stand-alone document explains the company’s aim to ‘contribute to the realization of a sustainable society’ on the basis of the concept of Design for Environment. Thus:

In addition to the company’s usual procurement standards regarding items such as quality, price and time required for delivery, companies of [the group] now also take into consideration the environment related activities of its suppliers and vendors as a criteria [sic] for procurement decisions.

Under the ‘Green Procurement Guidelines’, suppliers are asked either to become accredited to ISO 14001 or to draw up an environmental policy,