Barriers to Change in Manufacturing Supply

‘Purchasing is a performance-driven function; we have to add value in what we buy.’

Head of procurement, paper-making group

This book started out by arguing that industry is contributing to environmental degradation, and therefore has a duty to address environmental problems. Such an argument is buttressed by the often proactive stance of environmental policies and the promising advance of environmental management standards in large manufacturing companies. However, the progress that supply chain management has made in terms of environmental protection is, generally speaking, not encouraging. A gap emerges between the corporate rhetoric regarding the importance of environmental protection and its often marginal role in supplier selection and evaluation. Many supply chain managers show some awareness of the environment, yet of the issues perceived as problematic for their supply chains the two issues listed most often – packaging and waste – have only a marginal effect on the environmental performance of the supply chain as a whole. Where environmental initiatives are undertaken, motives for such measures are dominated by legal compliance, cost savings and quality improvements. Most managers are satisfied with a supplier performance that merely meets the threshold of current environmental requirements. A more comprehensive approach towards an ongoing commitment is rare.

Some industries were found to offer an above-average environmental performance. Paper-making, for example, offered the most consistent approach to the environment as all the visited companies include the environment in their supplier assessment criteria and apply a mixture of internal and external instruments to check supplier environmental
performance. The chemical industry is noteworthy in that it provided an example of a green multiplier effect. Overall, however, supply chain management input into environmental protection is fairly marginal, which contrasts with its growing importance in economic terms. Such marginal involvement in environmental initiatives can be for several reasons. There may be a lack of interest in environmental issues among supply chain managers; they may actively resist greater involvement; or the function could be prevented from making a more fundamental contribution. To gain a clearer picture of the barriers to greener supply, three levels of analysis will be examined: the process of managing supply; the person managing the process; and the organisation within which the person is working.

**Technical limits to greener supply**

The gap between the economic and ecological impacts of the supply chain management function has a technical dimension, as limitations to greener supply can arise from the required features of a product. Such limitations emerge, for example, in military electronics products. Electronic items for use in a fighter plane’s radar have to be able to withstand much greater temperature differences and more vibration than the average household electronic item. Hence the supply chain manager of a military electronics company commented: ‘We are not completely ignorant of the environment in what we do, but there may be areas of supply, because of the importance of the integrity of the item, where that would be a very low priority to us.’

Industry specific limitations further arise as the environmental performance of a product and its production processes can only be as good as the whole supply chain of the manufacturer permits. It is technically easy – if still involving additional cost – for pulp suppliers to the paper industry to refrain from certain methods of destructive forestry, such as clear-cutting, where the entire forest is felled and turned into wood pulp. By contrast, replacing heavy metals in electronics requires a far greater technical knowledge and investment on the part of suppliers. An example of a supply chain being in a position to improve the environmental standing of the customer are the suppliers of capacitors to a mobile phone manufacturer. These suppliers alerted the customer that palladium prices were increasing and suggested a man-made alternative. The initiative was undertaken primarily for reasons of cost and security of supply, but there are environmental side-effects, as the alternative product does not have to be mined. In any case, the environmental