Chapter 4

How Can Information Systems Improve Sustainable Procurement Policies?

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ABSTRACT

Sustainability has become a central corporate concern as well as a key factor of success in terms of both image and productivity. In turn, the purchasing function is crucial to the definition and implementation of a sustainability policy within the firm. This chapter combines a literature review with a qualitative study to show how information systems can and will contribute to the development of corporate sustainable purchasing policies. The chapter traces the development of new and innovative modes of sustainable purchasing management. Purchasing functions and information system departments work together to reduce the environmental footprint of technology and to exert greater influence on collaboration and teamwork by building an economic environment that is more viable and livable and also fairer.

1. INTRODUCTION

Information systems (IS) are the combination of computerized tools, human resources, and processes found in an organization to provide the right person with the right data at the right moment. IS management partially entails the ability to improve organizational performance, particularly regarding productivity (Bakos, 1987). Therefore, IS enable a leaner management of flows by reducing delays and errors, increasing reliability and responsiveness, eliminating undesirable tasks, optimizing resources, and facilitating decision making (Raymond, 2002). IS management’s strategic role in guaranteeing greater individual and collective efficiency is universally recognized (Lucas, 1975). The powerful connection between senior management and the IS department also attests to this, with the IS strategy exerting direct and crucial influence on the global corporate strategy. Information and communications technology (ICT) is a pillar of corporate activity because it (1) embodies competitive advantage with its optimization of processes, introduction of a high-performance technological watch function, and improvement in knowledge management.
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and (2) is a tool that creates indirect competitive advantage through, for instance, the development of new killer technologies (Bernasconi, 1996).

The idea here is that the purchasing function has a particularly significant role to play because it transforms intra-organizational information systems into integrated management programs while using the Internet and inter-organizational tools as platforms for managing supply chains and supplier relationships. Purchasing also plays a key role in companies’ overall sustainability policies and especially in ethical sourcing. Corporate responsibility implies awareness of the problems that local populations face in countries where the company wants to do business, plus a desire to help the people in question to find solutions instead of taking advantage of their unfavourable conditions to further augment corporate profitability. This is especially important given that customers are increasingly interested in the origins of the products they consume, something that strongly affects the corporate image in turn. A company that practices ethical sourcing and tries to promote good practices will be much more attractive to talented employees, investors, commercial partners, and new customers. Staff members, customer loyalty, price stability, and a good brand image should then ensure the company’s long-term survival. This study therefore focuses on the management of purchasing functions and a company’s use of information systems for sustainability purposes. The research question addressed in this article is: How can information systems contribute to corporate sustainable purchasing policies?

The article is structured as follows. The introduction presents the research question, its relevance, and the content of the article. The second section provides the theoretical foundations of the research. Purchasing management is presented as a conveyor of sustainability because this function yields the paramount action lever in environmental, social, and societal performance terms. The third section describes the research protocol based on exploratory and constructivist approaches associating business-forecasting and scenario methods. Twelve business experts are interviewed twice individually according to a precise interview format and asked to differentiate between good and bad practices. Their different viewpoints were then compared and reviewed to identify how information systems can favour sustainable purchasing practices. The fourth section presents a number of predictions grounded in literature and discussions with experts. A fifth section presents the contribution of the research and highlights theoretical and practical implications. Purchasing information systems’ potentialities with respect to the construction and dissemination of sustainability policies are demonstrated through illustrations and personal accounts.

2. THEORETICAL FOUNDATIONS: INFORMATION SYSTEMS SERVING THE SUSTAINABLE PURCHASING FUNCTION

Purchasing management and information system management play highly strategic roles in modern companies, particularly in large multinationals because purchasing often accounts for more than half the total revenues and constitutes a main source of competitive advantage (Murtaza, Gupta, & Carroll, 2004). Information systems can be used as tactical piloting tools enabling an optimization of operational management, information flows, resource allocation, competitive and technological watching, knowledge management and sharing, internal and external collaboration, and decisional analysis (Choi & Suh, 2005). Thus, associating these two functions (IS and purchasing) creates a powerful internal coalition capable of developing
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