Chapter XVII
E-Commerce Links for SMEs within the Industry Value Chain

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ABSTRACT

The objective of this chapter is to evaluate the use of e-commerce across the value chains of several companies. In order to fulfil this objective, two different types of supply chain are analysed: the first type consists of buyer groups in the consumer goods sector; the second is dynamic networks in the manufacturing sector. Having identified what value activities are automated, the chapter examines the level of ICT and how value activity interactions between organisations are supported with e-commerce. Building on the analysis of e-commerce technology usage, the development of virtual structures is examined and the roles that SMEs can play in these. The chapter seeks to demonstrate that, with the introduction of e-commerce technologies in value activities across companies, the role of the current players is changing. Finally, the extent to which the traditional supply chain tiers change into more virtual value chain structures is evaluated.

OBJECTIVES AND APPROACH

This chapter is based on research carried out as part of the EU research project KITS, which looked at the use of e-commerce by small and medium enterprises (SMEs) in value chain relationships. The objective of this chapter is to evaluate the use of e-commerce across value chains of several companies. In order to fulfil this objective, two different types of supply chains are analysed. The first type is represented by three buyer groups in the consumer goods sector, the second by two

dynamic networks in the manufacturing sector. They represent promising concepts for SMEs in terms of increased competitiveness. The research in this report focuses on firms engaged in the production and distribution of well established product types or services. The aim is to examine changes in existing commercial patterns as a result of the adoption of e-commerce in value chain relationships.

Porter's (1984) nine value activities were used as a starting point. Porter says: "Every company is a collection of activities that are performed to design, produce, market, deliver and support its product. All these activities can be represented using a value chain." Porter's value chain separates company activities into strategically important activities called value activities. These are physically and technologically distinct activities that the company performs.

For this chapter an analysis was carried out of value activities that are inter-linked across different organisations using e-commerce technologies. This approach enables the capture of types of electronic links between SMEs and their business partners which shape the organisation, the value chain itself, and the way in which business processes are carried out. As a result of differentiation and integration of economic activities across company boundaries, a network or value chain can stretch from one or several interwoven sectors. The unit of analysis is thus extended beyond the company to include some inter-organisational elements.

SAMPLE

In order to extend the unit of analysis in this way, it was essential that the companies interviewed were connected together in different types of supply chains. The aim was to interview as many companies linked together as possible, excluding individual SMEs, in order to capture different types and levels of value activity integration through electronic means. The supply chains targeted include large-scale companies but also included network structures, which were particularly favourable for SMEs. An additional requirement was that the interviewed chains and networks should use e-commerce technologies among them. In order to interview inter-linked companies, central points of the network or chain were identified. If the company in the central position refused to be interviewed, the whole chain was dropped.

The sample was composed of 24 companies as shown in Table 1. In addition, two interviews with industry representatives were carried out.

Broadly speaking, the sample is composed of two types of value chains that seem to group many SMEs:

- **Consumer Goods Sectors:** The first type of supply chain is grouped around buyer groups which seek to obtain better conditions with suppliers for their retail or wholesale members. These organisations can take the form of a company or an association. Some

Table 1. Sample structure

Type S	ector	Number of companies	Country
Consumer Goods	Textiles	12 G	ermany, Austria, Switzerland
F	ood	2	UK
W	ood Wholesale 2	G	ermany
Manufacturing	Aerospace	4	UK
M	anufacturing 4	G	ermany

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