

The Effects of the Internet Adoption In Customer-Supplier Relationships

The Markets - Vertical Alliances Divergence and the Emergence of Collaborative Markets

Stefano Ronchi



THE EFFECTS OF THE INTERNET ADOPTION IN CUSTOMER-SUPPLIER RELATIONSHIPS

THE MARKETS - VERTICAL ALLIANCES DIVERGENCE AND
THE EMERGENCE OF COLLABORATIVE MARKETS

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The Continuous Innovation Network

The Continuous Innovation Network (CINet) is a global network that brings together researchers and industrialists working in the field of Continuous Innovation. CINet is a continuation of the European Continuous Improvement Network, started in 1993. In 2000, the mission of EuroCINet was reformulated and its name changed to CINet, a research network on Continuous Innovation. These changes facilitate the dissemination, not just within but beyond Europe, of a new way of thinking about the integrated management and organisation of day-to-day operations, improvement and learning, and innovation and change.

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CINet has developed a PhD network, which promotes research collaboration among PhD students and their institutions on topics of interest to CINet. In detail, the network objectives are as follows:

- To promote the development of research on continuous innovation and its applications to enhance companies' effectiveness and better use of human resources for more sustainable organisation of work.
- To facilitate research integration and mobility on a global level.
- To enhance research quality and, in particular, to promote synergy and collaboration on empirical research.
- To promote a better quality of PhD training and supervision.
- To promoting joint research programmes involving companies and academia offering the prospect of rigorous training and exposure of PhD students.

The CINet is unique for its focus on innovation management as well as for the specific vision that is shared by partner institutions concerning the role and potential contribution to innovation and improvement of human resources at all levels.

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1. Introduction

In the last years a great attention has been paid to the potentialities related to the Internet adoption within business processes. Firstly, the introduction of web-based technologies led to the e-commerce paradigm: companies started to adopt the new technologies in order to enter new markets, to enhance revenues in existing ones and to supply better customer services to the final consumer. Soon the e-commerce became e-business due to the interaction of the new technologies with all processes within the company. As a matter of fact, also processes going beyond the boundaries of the firm are influenced by this trend and in particular the relationships among companies within the supply chain are changing in order to face new threats and opportunities.

As far as the relationships across the supply chain are concerned, the Internet seems supporting two apparently contrasting trends. On the one hand, standardization and market mechanisms are emphasized through electronic catalogs, auctions and liquid exchanges. On the other hand, there is the opportunity to enhance the value added with higher customization and to improve supply chain performances with close relationships through new technologies, which make integrable different companies' information systems. At a first glance, it could be hypothesized that the first trend should support indirect or MRO (Maintenance, Repairs and Operations) materials purchases; while the second trend should support direct or customized materials procurement.

In reality, the consequences of the introduction of the new technologies are rather complex and, although they do not change dramatically traditional business concepts, their influence on supply chain management and companies' relationships is not easy to analyze. The Internet changes the nature of traditional relationships and leads to new possible configurations. Those changes are allowed by the technology, but its introduction will not be worthwhile if it is not supported by an integrated analysis within the company and beyond it, upstream and downstream in the supply chain. This implies the reengineering of processes, organizations and managerial configurations. Performances of processes across the supply chain are strongly influenced by these interactions between new managerial and organizational configurations and new technologies. There is not a deterministic one-way impact of one of these two areas on the other, but their development is mutually fostered and supported by each other.

Within such context, the aim of this research study is to analyze and to understand clearly what are main implications related to new technologies on vertical relationships between companies along the supply chain. In particular, three main objectives are addressed in the work.

The first main objective of the research is to clarify what are the motivations that should stimulate companies to adopt web-based technologies within their relationships with suppliers.

The second objective is to identify what are the appropriate Internet tools companies should adopt according to their specific goals.

Finally, the most relevant objective is to explain what are the implications on customer-supplier relationships related to the Internet adoption.

In order to answer these research questions, all the study has been based on a wide literature review and systematization, which mainly concern three research streams: supply chain management, customer-supplier relationships, and Internet tools adoption within inter-enterprise relationships. Literature analysis supported the clear definition of the research questions and the formulation of preliminary research assumptions. The overall empirical methodology has then followed three subsequent stages. The first stage is exploratory in nature and consists of case analyses and qualitative interviews. The second stage is explanatory in nature and consists of survey analysis. Finally, the third stage is descriptive in nature and consists of web sites analysis. Along the entire research process, the unit of analysis has been the customer-supplier relationship.

The exploratory stage aims at identifying main variables explaining and influencing the Internet adoption in procurement relationships. Evidence has been collected from four case studies of companies adopting the Internet in some of their relationships with suppliers. In addition, a wider inquiry has been carried out over the Internet and with academics, consultants, and experts in the field in order to gather further information about general trends in such context.

The outcome of this first stage is the formulation of preliminary answers to previously mentioned research questions, thus stating clear hypotheses underlying such answers.

Subsequently, the explanatory stage aims at testing formulated answers and related underlying hypotheses through a survey analysis. Such survey is based on a questionnaire sent out in the period July-August 2001 to a sample of 1.500 North American companies, randomly selected from a 15.000 firms database, which resulted from data provided by the NAPM (National Association of Purchasing Management), the CLM (Council of Logistics Management), and the PMAB (Purchasing Management Association of Boston). Valid responses are 162 out of 185 respondents (response rate of 12,3%). Collected data were analyzed through different statistics methods; as far as the testing purpose of the analysis is concerned, factor analysis, logit and multiple regression models, and analysis of variance techniques have been adopted.

Finally, as research hypotheses were proved, an Internet research has been performed in order to collect and analyze further data about emergent supply chain services offered on web, thus providing a detailed description of web-portals supporting coordination and collaboration between customers and suppliers.