



Integrating Technology

Expertise and Innovation—Information Technology Strategies in the Financial Services Sector, R. Fincham, J. Fleck, R. Procter, H. Scarbrough, M. Tierney and R. Williams. Oxford, New York: Oxford University Press, 1994. 334 pp. £35.00. ISBN 0-19-828904-9.

This book is the result of a multidisciplinary research project on the development and application of information technology (IT) in retail financial services. The research was coordinated at Edinburgh University, where four of the six authors are based, and brings together expertise from various social sciences such as organization theory, social studies of technology, industrial sociology and business strategy, and from computer science. In their empirical investigations the authors concentrate on the Scottish part of the industry, which they see as a distinct field within the wider UK context. Using case-study methodology, material was gathered on strategic innovation projects of major banking, insurance and credit-card companies. The systems looked at were geared to management information, branch automation, card processing and similar purposes.

The book does not consist of lengthy, detailed case studies of IT development projects and a reader who expects this from an empirically orientated account will be disappointed to find only a single introductory chapter, which contains seven 'case studies' of 5 to 9 pages each. Virtually no information about methods of acquisition and evaluation of the empirical data are given and one does not even get a clue as to how many interviews were conducted or what kind of questions were asked. However, the book is not meant to be a collection of (qualitative) data, rather, it is a book that explores highly sophisticated social processes on the basis of empirical information and insight. It presents a wide range of conclusions from the empirical investigations and places emphasis on considering these in the light of other research relevant in the area. For instance, transaction-cost theory (Williamson, 1985), which claims to explain the dynamics of make or buy decisions, is discussed against the background of the studied cases where the question of whether to develop a system from scratch or to buy in standard software tools was answered in different ways by different firms. Another example is Friedman's (with Cornford, 1989) view on user relations in the



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course of development processes, which is tested against the authors' material. Throughout the book, both the empirical and the theoretical level of the argument are present. This may appear to be a disadvantage at first sight, but while reading the book one becomes accustomed to this presentation and starts to value the variety of links between various nodes of the argument, which are made possible only through the specific structure of the text.

The book is neither a collection of data nor a handbook which represents basic knowledge of a certain subspecialism in an orderly form. Readers whose evaluation criteria are orientated to the latter type of publication will find far too much overlapping of sections and subsections. However, for those who are curious and want to learn about a new multidisciplinary field of research which nowhere fits into the patterns of traditional compartmentalized disciplines, the book is highly interesting. I myself, sympathizing with approaches which involve different disciplinary views, find the text a major step forward towards understanding the management of expertise and the social processes of technological innovation.

After the opening chapters, which set the scene and include the short descriptions of the cases, part I of the book, entitled 'Strategy', looks at the conditions of managerial decision-making which lie beyond the boundaries of organizations. Corporate strategy is seen as being highly influenced by the environmental framework in which firms are embedded. Readers interested in theory will deem it deficient that the authors confine their interest to the sectoral context and do not include more general institutional arrangements, including aspects of economic policy or legal regulation which originate and are also relevant beyond the sectoral specifics. But one has to admit that this would possibly go too far, and presupposes an even wider concept of research design. What, in my eyes, counts more is that the authors systematically link their analysis of central elements of the sectoral environment to the processes of strategy formation within firms. In doing so, neither the environment nor organizational strategies are seen as determining the other, but both sides are understood as influencing each other substantially.

Part II of the book focuses on the development and implementation of technological artifacts, reviewing current trends in IT technology suitable for application in the retail financial services and discussing software development practices and approaches to user involvement. Again, these technological concepts are not seen as determined by organizational structures or social actors' strategies, and, conversely, neither are they viewed as objective parameters of organizational development or decision-making processes. Rather, relations of interdependence and two-way influences are emphasized. Technology is thus revealed as both the result of and the precondition for social action in the process of the 'social construction of technological systems' (Bijker et al., 1987).

In part III the management of expertise is subject to the analysis. The concept of expertise is deconstructed and the dimensions (knowledge, power and tradability) are thoroughly investigated. Here, the argument is that knowledge only becomes an important ingredient in the social processes of technological innovation when it can be presented as legitimate within the organization context (power) and when knowledge-holders can mobilize external resources to underpin their value as experts for the organization (tradability of knowledge on labour markets). Thus, expertise appears to be



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the theoretical core of the book's central argument, as this concept allows one to link the level of social action with the organizational and the sectoral level. Strategies and interests as well as technological artifacts and organizational structures embody expertise and, on this basis, are integral parts of processes of socio-technical innovation.

The retail financial-services sector is highly suitable for the kind of investigation the authors present in this book. Substantial innovation of IT has often originated in and is in heavy demand within this sector, which trades with nothing but information. Back-office concepts of IT applications are long gone in this industry and large networks of distributed IT, which run through the whole organization and beyond, are characteristic of the sector today. Thus the questions of how to integrate technology, organizational structures and social actors' interests can be studied in this field better than in any other industry. The conclusion of the book draws together some strands of the argument which had remained loose and draws a conceptual picture of central research issues in this fascinating topic. I read it as an intermediary result, which whetted the appetite for more accounts of this field of research.

Some readers interested in theory will miss some of their favourite literature and ask why, for instance, Grabher (1993) ('embedded firm'), Giddens (1984) ('structuration theory') or accounts from the sociology of knowledge are not mentioned, although the authors refer continually to these concepts. I tend to see it as indicative of the fact that the book integrates a vast variety of very different and important aspects of the social processes of technological innovation—there are just too many approaches from various disciplines which are relevant in some way. More important than the incompleteness of the reference list is that the book includes a helpful index, which invites the reader to work with the book and to continue to learn much from it after having read it for the first time.

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Reinhard Bachmann

Technical University of Hamburg-Hamburg