Chapter 15

Information Technology for Knowledge Management in China

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Knowledge management concerns integrating, sharing, accessing and accumulating information for action throughout the organisation (Pelton, 1999; Porter, 1998). It has been receiving increasing attention as the latest information technology based system to improve organisational efficiencies, which may be in the forms of successful implementation of innovations (Huber, 1990), sustainable competitive advantage (Grant, 1996a, 1996b) or productivity gains (Davenport et al., 1996). In knowledge management, information technology is an essential enabling tool because of the latter’s unprecedented technological power in information processing, storing and transmission (Hanley, 1999; Porter, 1998). Information technology provides the technological infrastructure for knowledge management (Davenport et al., 1998). However, the effective use of information technology for knowledge management requires the managers to take cognisant of the factors that influence the information technology adoption process as well as the implementation of knowledge management practices. These factors could be external or/and internal to the organisation.

This chapter highlights the characteristics of the internal organisational factors that are of concern to the use of information technology for managing information and knowledge within the state-owned Chinese banks in the People’s Republic of China. The time focus of this research is between 1957 to 1995 in which this time period is
segmented into pre-reform period (1957 to 1978) and reform period (1979 to 1995). Information for this research paper was gathered by means of questionnaires, interviews and secondary data sources.

(Summary tables on the characteristics of the organisational factors over the different periods will be presented in the conference.)

**ORGANISATIONAL FACTORS IN INFORMATION TECHNOLOGY ADOPTION**

This paper employs a combination of the organisational factors from the Davis and Olson’s (1985) version of organisational subsystems and the McKinsey Seven ‘Ss’ (Athos and Pascale, 1986) to obtain a wider latitude for conducting the analysis at the organisation level. These key organisational factors are technology, structure, strategy, task/system, people and culture.

**Technology**

A significant contribution of information technology has been its capability in providing unprecedented opportunities for sophisticated and advanced levels of interaction. In particular, the distinctive electronic networking characteristic of today information technology allows interconnection among the various entities existing in the value chain system, thereby providing a potential for efficient flow or exchange of information and knowledge between the contributors and users. The history of information technology adoption within the Chinese state-owned banks revealed the difficulties faced by these banks in securing advanced technology and in securing a stable technological infrastructure that are conducive to information and knowledge management.

The initial adoption of technology within the Chinese banking system was led by the Soviet Union in 1957. The technology transferred by the Russians was outdated and the transfer process was short-lived, and had remained a working tool for specific tasks in the work process until 1970s.

After the Sino-Soviet rift in 1959, the banks have always aimed for newly emerged and high-end technology in their independent decisions to adopt or replace technology. However, this was blocked by the international restrictions imposed by COCOM\(^1\) on the export of high-end technology to China.

In order to overcome the international restrictions imposed by COCOM during the pre-reform period, the country attempted to secure high-end technology from other disparate sources. China turned to France, Western Europe, Japan and other countries at different times to gain access to high-end technology. This resulted in the lack of a stable technological platform for the evolution of a consistent technology application paradigm. It was only during the reform period, when there was relaxation in the export restrictions, that China began to gain regular access to up to date high
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