Distributing Global Information Systems Resources in Multinational Companies—A Contingency Model

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The recent realignment of national boundaries and the restructuring of national economic policies around the world have highlighted the need for effective management of international Information Systems (IS). This article re-examines the issue of IS resource management within the international dimension. Previous debate on this issue has centred around conflicting views on the need for headquarters to assume control and subsidiaries to exercise freedom, supporting two forms of IS structure - centralized and decentralized. However, the authors argue that centralization and decentralization of IS should constitute the two extremes of a continuum and this continuum relates to the extent to which the multinational company (MNC) adopts a multidomestic structure or a global one. This contingency view of IS and organizational alignment is presented and related to concepts on organizational fit and information sharing. This paper examines the question of IS resources management from the following aspects: firstly, the drive for internationalization and the differences between a multidomestic, global and transnational approach is discussed. From this, a continuum model for the alignment of MNC structures and IS services is proposed. Finally, a number of research areas based on the continuum model are identified for further study within a global research framework.

In the last decade, the role of information systems (IS) has moved quite dramatically from organizational support systems to strategic weapons in the company portfolio. With recognition of the strategic potential of IS to the organization, the question of how best to manage the information resources has assumed greater importance to practitioners and researchers alike [Wiseman, 1988; Niederman, et al., 1991; Clark, 1992]. This is not the first time the issue has been raised and, as such, it may be too easily dismissed as a continuation of the debate with regard to the extent of centralization / decentralization appropriate for information systems services support ongoing since the seventies [Dearden, 1987; Edwards, et al., 1989; Feeny, 1989; Owen, 1990; Morison, 1991]. A number of other factors, however, have combined to refocus the issue as one of critical concern for the nineties.

The very recent realignment and removal of national boundaries around the world (such as in Eastern Europe and former U.S.S.R.), and the restructuring of national economic policies (such as in China and Japan) have been accompanied by the setting up of trading blocks (such as the European Economic Community - EEC in Western Europe, the North American Free Trade Agreement—NAFTA in North America and the Integration Association in Latin America) opening many new routes for international co-operation. Organizations are now in need of IS which can transcend local operations and facilitate the development of international trade [Roche, 1992]. As a result, this intensifies the problems faced in IS management by introducing the issue of international management across a number of cultural and political barriers, coupled with the sheer immensity...
of multinational IS services.

Over the same time period, we have also witnessed a technology initiated change in organizational structures through the utilisation of telecommunication networks. Organizational control and communication structures can now be managed effectively without the problems of physical restructuring. This “logical” organization structure has not only greatly enhanced the drive towards globalization, but at the same time created logical and physical problems for IS resource management. These relate not only to IS services, but also to the whole decision making network which represents the organization.

In this paper, the issue of IS resource management is re-examined within the international dimension. Previous debate on IS resources management issues has centred around conflicting views on the need for headquarters to assume control (centralization) and subsidiaries to exercise freedom (decentralization). The authors contend that it is too simple to resolve the issue from such traditional arguments and, instead argue that centralization and decentralization should constitute the two extremes of a continuum. This continuum relates not to freedom or control but to the extent to which the organization adopts a multidomestic structure or a global one. A major tenet of this paper is that the differences between these two organizational concepts has not been fully recognized in previous studies on organization of IS services.

In this paper, the question of the distribution of IS resources is examined from the following aspects: the drive for internationalization; the differences between multidomestic, global and transnational approaches; a continuum model for MNC structures and the IS services alignment in MNCs. Finally, a number of research areas are identified based on the continuum model and a particular direction proposed for further study within a global research framework.

**The Drive for Internationalization**

In recent years, it has been argued [Deans & Kane, 1992] that the worldwide economic situation has been transformed from a regional economy into a global economy. Companies have to compete not only with their regional and domestic competitors but also with their global rivals. A number of factors have contributed to this change.

Many organizations cite “growth” and “world leadership” as their corporate objectives. This not only reflects a desire to be “number one”, but also recognises the advantages of economies of scale [Ives & Jarvenpaa, 1991; Neo, 1991]. Economies of scale are not restricted to tangible operational assets, but also include intangible company expertise and experience. In this way, organizational units can transfer experience, expertise and technology to other organizational units in different geographical locations under the same company in order to deal with similar situations but in different markets. Whilst direct transfer may not be possible without some retailoring for the local market, the overall investment is generally considerably lower than that required for a start-up operation. MNCs can both increase their market population and serve their customers more effectively [Neo, 1991]. Operating in a number of geographic regions normally allows the MNCs to operate around the clock and gives them considerable competitive advantages [Keen, 1989; Ives & Jarvenpaa, 1991]. It is therefore hardly surprising that the last thirty years have witnessed the emergence of the world’s biggest corporate structures. More recently, however, additional impetus for international expansion has come from external forces.

During the past five years, the world has experienced a shift in global alignments. The unification of the European Community markets in 1992, the success of the democratic movement in Eastern Europe in 1990’s, the restructuring of the political and economic systems of Soviet Union and its transformation into the Commonwealth of Independent States, and the opening of a vast China market to other countries have combined to offer worldwide opportunities. The result has been a dramatic emergence of new high potential markets to companies and a concerted thrust towards an international focus. In many cases, this has been accomplished through a series of complex alliances across a number of geographic and cultural boundaries, redefining the whole concept of organizational structure. IS which were designed to support simple organizational models are no longer relevant to the MNCs.

The thrust towards internationalization, however, is also a product of the application of information technology itself [Senn, 1994]. With the assistance of computer networks and advanced technologies, people can communicate and receive messages from others instantaneously without the constraint of geographic locations and time. This advancement of computing technologies also allows IS to perform very large scale data exchange activities much more effectively and efficiently. Systems such as these have already begun to