Organizing Global IS Management to Meet Competitive Challenges—Experiences from the Pharmaceutical Industry

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Despite the widely acknowledged importance information technology plays in multinational corporations, many companies lack an understanding of when and how to (re)organize global IS management. The issues of timing and organization of global IS management, however, seem to be of utmost importance in a company’s attempt to implement a new, global business strategy. Based on three case studies from the pharmaceutical industry, this paper analyzes the sequence in which business strategy, organizational structure and global IS strategy/structure should be designed to respond to changes in the competitive environment. Furthermore, it argues that new ways of designing IS management in MNC might be needed to meet the information processing requirements resulting from global business strategies. The paper concludes with suggestions for future research.

The relationship between an organization’s environment, business strategy and organizational structure on the one hand, and IS strategy and structure on the other hand, has been widely discussed in literature. However, as the competitive environment in most industries has changed dramatically over the last few years and the companies adopt new strategies and structures, more research is required as these changes have not been sufficiently incorporated in the research yet.

Over the last few years most industries have become multinational industries. Globalization forces many multinational corporations (MNC) to seek new ways to manage their worldwide operations. In order to achieve economies of global scale, to develop products for worldwide sale, and to provide high quality service to customers around the world, careful coordination of activities across national borders is required (Welge/Böttcher, 1991; Macharzina, 1992).

Despite the widely acknowledged importance information technology has in MNC (Senn, 1994), many companies lack the understanding of when and how to (re)organize global IS management. Although some anecdotal evidence exists on the role IT can play in global firms (Reck, 1989, Runyan, 1989, Carlyle, 1990), the IS strategies and structures needed to support the multinational firm’s global business are yet to be systematically investigated. Several authors suggest contingency approaches describing IS strategies/structures that fit certain types of business strategy and organizational structure. But, as Earl/Feeny put it, “the resolution is not as straight forward as speculative practitioner and academic articles suggest” (1992, p. 20). Furthermore, the timing of adapting IS strategy and structure to the new business strategy and organizational structure appears to play an important role but has hardly been considered in literature.

This paper addresses the issue of organizing global IS management to meet the new competitive challenges based on case studies from the pharmaceutical industry. The analysis focuses on the sequence in which changes in business and IS strategy and structure are implemented and the way IS management is organized. The
next chapter presents the background and motivation of
the study. After discussing the methodology, the case
studies are presented and analyzed. The paper concludes
with suggestions for future investigations of global IS
management.

Background and Motivation

A number of authors have proposed contingency
approaches for global IS management (Cheung/Burns,
1994). They assume that IS strategy and structure in
MNC must fit business strategy and organizational
structure for the companies to be successful (Reck, 1989;
and Young (1992, p. 501) point out “the fundamental
challenge is to manipulate the activities of the informa-
tion technology organization to define, within economic
and organizational constraints, activities and technolo-
gies that are the most responsive to the requirements
of the business strategy and the unique characteristics of
the international environment.”

Based on the well–known contingency model for
designing MNCs provided by Bartlett/Goshal (1990),
Ives/Jarvenpaa (1991) distinguish four business strate-
gies for MNC: The multinational strategy which focuses
on local responsiveness, the global strategy which is
driven by the attempt to gain competitive advantage
through global efficiency, the international strategy
which builds on innovation, and finally, the transnational strategy which is aimed at combining the
advantages of the first three strategies. For these four
business strategies they identify corresponding IS con-
fugurations. The multinational strategy is best supported
by an independent IS strategy which gives the subsidiar-
ies full autonomy for systems development and opera-
tions. The headquarter driven strategy focuses on strong
centralization. Decisions are taken in the headquarter to
ensure economies of scale. This best fits the global
strategy. Under the intellectual synergy strategy the
subsidiaries are given autonomy in systems develop-
ment and operations. However, considerable informa-
tion exchange takes place and experiences accumulated
in other parts of the company are passed on. This ap-
proach is suitable for companies pursuing an interna-
tional business strategy. The information processing
requirements resulting from a transnational strategy are
best met with an integrated strategy for IS management.
This strategy focuses on a common worldwide IS archi-
tecture and joint decision-making, development, and
implementation.

The contingency approach can be regarded as a first
attempt to relating management of MNCs to issues of
global IS management. However, several shortcomings
should be considered (Schwarzer, 1994). The contin-
gency approaches are based on the assumption that a
company can be characterized by one business strategy/
structure and one IS strategy/structure. Several authors
remark, based on their experience in MNCs, that it is
very unlikely that any one strategy will suffice in an
MNC to satisfy the various functions appropriately
(Ward, 1987; Reimitz, 1990; Earl/Feeny, 1992). De-
pending on the criticality and stage of development of
the applications in the different departments, various
strategies will be more or less appropriate. This notion is
also expressed by Griese (1990) and Neo (1991) who
suggest that in a global environment the chances of
gaining strategic advantage through the use of IT should
be checked for each of the activities in Porter’s value
chain separately.

As Earl/Feeny (1992) point out, the often cited
classifications of business and IS strategies are too
general to provide an in–depth insight. Their case studies
show that even though two companies follow the same
business strategy, they are likely to have chosen different
ways of organizing their business (Macharzina, 1993)
and IS management. The contingency approaches can-
not explain these differences as they propose that there
is one best way of organizing. An issue that is mostly
neglected is the question of timing the changes. Based on
Chandler’s “structure follows strategy” paradigm
(1962), the management literature stresses the sequence
of changes in the environment – change in business
strategy and finally change in organizational structure.
The IS literature has stressed the importance of aligning
IS strategy to business strategy, also expressed as deriv-
ing IS strategy from business strategy (Boytont/Zmud,
1984; Lederer/Putnam, 1986), implicitly assuming that
business strategy has to be there first. Combining the
thoughts of the management and IS literature the se-
quence shown in figure 1 can be expected.

Even though the contingency approaches stress the
importance of matching organizational structure and IS
structure, they do not provide any evidence in which
sequence the match should be achieved. This question,
however, seems to be of importance as critical voices
question not only the structure follows strategy para-
digm (Hall/Saias, 1980; Burgelman, 1983), but also the
idea of deriving IS strategy one–way from business
strategy (Earl, 1989; Krcmar, 1991). It therefore seems
important to analyze the sequence and timing of the
changes in business and IS strategy and structure.

At the moment, the existing body of knowledge in
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