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Enterprise Systems in International Business Operations: The Benefits and Problems of Fit in International Enterprise Systems Implementation

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ABSTRACT

This research strives to create an in-depth understanding of the benefits and problems of fit in international enterprise systems in both head offices and local business units. Through case study of four international organizations this study intends to assess the alignment between international organizational operations and enterprise systems configuration. Different aspects of the impacts on both head office and local units are then analyzed. Major findings are:

- | A misfit between international ES configuration and business operation can still lead to successful implementation and beneficial system utilization if the after-implementation business operation fits the ES operation.
- | ES can be applied by international enterprises to transform the global operation.
- | International ES implementation can run smoother if BPR is applied.

It is hoped that the broad-scope, multi-dimensional impact analysis of international ES fit could provide a useful insights for understanding the various consequences of ES fit in international business operations.

Keywords

International business operations, enterprise systems, IS fit, enterprise systems benefits

RESEARCH MOTIVATION AND RESEARCH OBJECTIVES

Enterprise systems (ES) support international operations in both global integration and local adaptability. They not only simulate the business environments of many countries but also transform their process information into consolidated reports to head office (King and Sethi 1999). Many organizations wishing to improve their international operations have ventured in search of the most suitable International Enterprise System package. Due to the complexity of the data and processes of head office and of different subsidiaries, maintaining a fit between international business operations and a multi-site system configuration has become one of the most important aspects of ES implementation (Lai, 2001; Markus, Tanis, and Fenema, 2000; Stedman, 2000). However, it is hard to tackle these challenges without a full understanding of the consequences on stakeholders of the implementation of such a complex system in all business areas. Head offices need to understand the different local effects on total business operations, and local offices need to be aware of their contribution to global efficiency and the possible tradeoffs between global control and local response (Ciborra and Braa, 2001; Clemmons and Simon, 2001).

Studies on IS fit (Brown and Magill, 1994; Das, Zahra, and Warkentin, 1991; Henderson and Venkatraman, 1993; Iivari 1992; Leifer 2000; Reich and Benbaset 1996; Venkatraman 1989) and global IS fit (Jarvenpaa and Ives, 1993; Peterson, 2001; Tractinsky and Javenpaa 1995) have presented useful frameworks for classifying and assessing the fit of an information system, assuming fit will lead to performance improvement. However, neither the broad consequences nor the various stakeholders' views have been empirically tested. Nevertheless, previous ES studies have revealed that strategic and managerial benefits such as global consistency, efficient resource control, or improved decision-making are planned or realized mostly by the central offices of international businesses (Mitchell, 1999; Newing, 2000; Stahl, 2003). But operational and organizational problems such as loss of customer responsiveness, increased customization costs, or conflicts within the local environment have also been noted (Feeny and McMullen, 1999; Rutherford, 1999). It seems that the lack of a complete overview of the multiple impacts of international enterprise systems can lead to misguided ES implementation.

To fill the gap between the assumption of fit benefits from ES implementation and the actual impacts of ES fit, this project attempts to create in-depth understanding of the benefits and problems arising from fit in international enterprise systems in both head offices and local units. By applying Javenpaa and Ives' (1993) framework of IT fit to Bartlett and Ghoshal's international business structures (1998) and Shang and Seddon's (2002) framework of ES impacts, this study plans a detailed case analysis of four international businesses to assess the alignment between the international organizational operations and enterprise systems configuration. Different aspects of the impacts are then analyzed to develop deeper and more complete understanding of the impacts of international ES fit. It is hoped that this broad-scope, multi-dimensional benefit analysis of international ES fit can provide a useful approach for understanding the various consequences of different forms of fit between international practice and system configuration, and assist business managers to develop more effective strategies for maximizing benefits from their investment in international enterprise systems.

LITERATURE REVIEW

International Business Operations

International business operations are activities undertaken by a multi-national company outside its domestic base. Different ways of achieving balance between the pressures for international integration and local responsiveness indicate different requirements for sharing and processing information. Four distinct strategies (depicted in figure 1) for managing organizations across borders have been identified (Bartlett and Ghoshal, 1998): multinational, international, global and transnational.



Figure 1. International Business Operation

The global orientation firm has a strong focus on seeking global efficiency through consistent operations and centralized world resource management while the multinational orientation firm is characterized by strong national bases, which results in conceding substantial autonomy in decision making to foreign subsidiaries.

International orientation describes firms whose strategic focus is on worldwide diffusion, which gives local units a large degree of discretion in adopting and modifying headquarter's products, but these local units are also dependent on the parent for new products and technological know-how. The decision-making structure of an international company is less decentralized than that of a multinational company, but more than that of a global company.

Transnational orientation typically involves firms concerned with attaining global efficiency and flexibility, and promoting communication and organizational learning among business units. The country units serve both independent local needs and interdependent global needs.

Information Systems of International Business Operations

The organizational characteristics of centralization, dispersal, and coordination are differently reflected in various kinds of international IT operations (Ives and Jarvenpaa 1991; Rebstock and Selig, 2000; Sambamurthy and Zmud, 1999) and management (Broadbent and Butler, 1997). Patterns of global information system implementation have been found to be aligned with international business operation strategies.

In a centrally coordinated business structure, IT is also globally centralized. Local autonomy appears to be a moderating variable, as can be seen from the differences in the IS characteristics of global and parent-child firms (Ives and Jarvenpaa 1991). Firms with a global business orientation focus on customer services and cost advantages and centralize their assets and management on a global basis.

Firms with multinational orientation tend to build up independent IT operations in their subsidiaries. Application portfolios bear little resemblance to one another and contain few common systems.

Transnational firms aim to achieve global flexibility, efficiency, and the transfer of learning across business units. This is made possible by the worldwide integration of information and core business processes. Innovation and individual excellence are promoted and reengineered for worldwide application. More joint headquarter-subsidiary activities are noted than in the other kind of operations.

The strategic focus of international orientation is the adoption of parent company policies and practices in a mixed centralized/decentralized structure, based on core competencies. These firms may have several global systems, but those systems are likely to be locally tailored and running under the control of the subsidiary. The IT relationship between the subsidiaries and headquarters is characterized by interpersonal contacts, cooperation, and shared planning. It may also extend to seeking volume discounts or site licenses from vendors.

Enterprise Systems Implementation in International Operation

Enterprise systems, from vendors such as SAP, PeopleSoft, and Oracle, integrate enterprise information, including financial, human resources, logistics and marketing information, throughout and across organizations, creating single data repositories that feed information into applications supporting several or all business functions of multiple sites. With systems linked, one data entry can then be accessed by anyone anywhere across borders and worldwide resources can be centrally managed (Davenport, 1998, Deloitte Consulting, 1998).

Since ES vendors design software to function in different countries they also have staff in these countries who are knowledgeable and accessible. The functionality of enterprise systems is evolving with regular upgrades and constantly advanced technologies. Implementing enterprise systems in complex and geographically dispersed organizations involves difficult, possibly unique, technical and managerial choices and challenges (Markus et al., 2000). A multi-site ES implementation has at least four different levels: business strategy, software configuration, technical platform, and management execution. Successful multi-site ERP implementation involves a consistent arrangement between business components and system configurations on all these levels

RESEARCH FRAMEWORK

As depicted in figure 2, this study tried to assess the fit between international operations and enterprise system configuration with related impacts on both head office and local units to be examined.

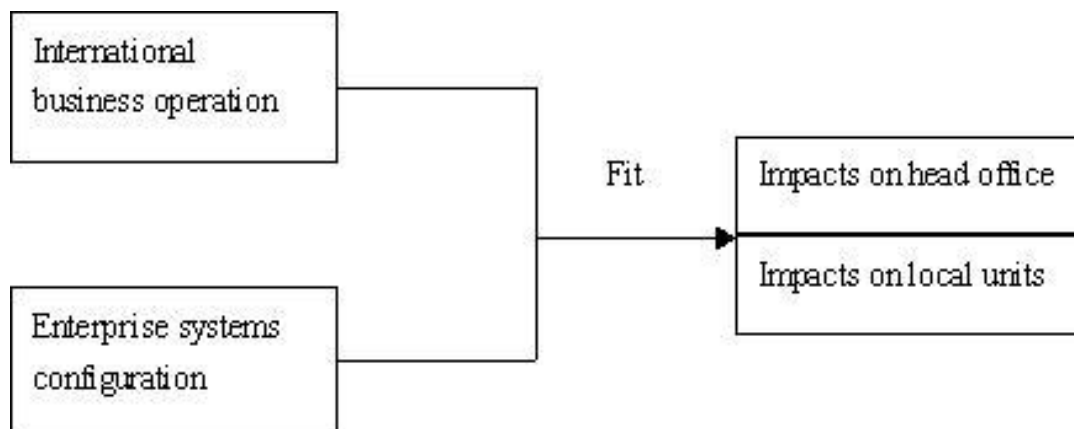


Figure 2. The Impact of Fit Between International Business Operations and ES Configuration

The concept of 'fit' expresses the idea that the object of design must match its context in order to be effective (Iivari 1992, Venkatraman 1989). Fit has been defined as the degree to which the needs, demands, goals, objectives, and/or structure of one component are consistent with the needs, demands, goals, objectives, and structure of another component (Nadler and Tushman, 1980). Because of its completeness and relevance to the study Javenpaa and Ives's framework of examining fit between international business operations and IS configuration will be applied and modified according to the special characteristics of enterprise systems to assess the fit between international business operations and ES configuration, and Shang and Seddon's enterprise systems benefit framework will be applied in order to assess the consequent benefits and problems comprehensively.

International Business Operations

The international business operation variables are designed to capture the four structure models of Bartlett and Ghoshal (1998). This will be reflected in the business structure and the locus of organizational decision-making

Business Structure

This is looked at to understand which of the alternative structures most closely resembles a firm's corporate approach to operating in a foreign or global market.

Locus of Organizational Decision Making

This section assesses the relative influence of the subsidiary versus headquarters on six activities: (1) introducing a new product, (2) changing an existing product, (3) changing a production process, (4) restructuring the subsidiary organization, (5) recruiting subsidiary senior management, and (6) developing career plans for senior management in subsidiaries.

Enterprise Systems Configuration

Firms reporting that they build IT configurations according to their international business structure can be characterized along five dimensions: the locus of ES decision making, the number of common systems, the mode of operation, the development approach, and the reporting structure. Since enterprise systems provide the flexibility of supporting dynamic control and decentralization capabilities in an international operation, a similar approach can also be applied to analyzing the consistency between international operations and ES configuration. The detailed items of these dimensions are modified according to the processing nature of the enterprise systems.

ES Systems Operations

Interviewees will be asked to identify the firm's ES operations approach in international operations.

Locus of ES Decision Making

This section assesses the autonomy of foreign subsidiaries regarding the following ES implementation decisions: (1) ES selection, (2) operating systems, (3) hardware, (4) database, (5) staffing of senior ES positions, (6) configuration standards, tools & methodologies, (7) implementation of partner selection, (8) project goals and scope, (9) implementation strategy (big bang, phased..), (10) delivery dates, (11) selection of empowered decision makers, and (12) fulltime employment of the best staff.

Text Common Systems

This is designed to understand the range of scope of global standard data and processes.

Management of ES Operations

This is designed to understand the degree of control each local unit has over their enterprise systems.

Development Approach

This is to analyze the control and involvement of global and local resources in the ES configuration

ES Reporting Relationship

This item assesses the reporting design/format? of senior subsidiary IT managers to the headquarter's IT head.

The hypothesized relationships between the dimensions of ES configurations and international business operations are listed in Table 1.

ES dimensions	Multinational	Global	International	Transnational
Locus of ES decision-making (decentralized)	++	--	++	+/-
Common systems (number of)	--	++	++	++
Mode of operations (decentralized)	++	--	++	+/-
ES reporting (decentralized)	++	--	++	-
Development approach (decentralized)	++	--	++	+/-

Table 1. The Relationships Between the Dimensions of ES Configurations and International Business Operations (adopted from Javenpaa and Ives 1993)

++: very high; +: high; --: very low; -: low; +/-: joint/combination of centralized/decentralized

The Impacts of Enterprise Systems on Head Office and Local Units

In order to assess the impacts of international ES fit in diverse dimensions Shang and Seddon's (2002) ES benefit framework is applied for its comprehensiveness. This framework (Table 2) was proposed by reviewing and consolidating the literature on IS benefits, tested and enriched by reviewing 233 Web-published ES cases, and verified by directly contacting 34 cases. The result was a modified ES benefit framework with a detailed list of 89 benefit items obtainable from ES use (a detailed list of ES benefit items is given on the first author's website)

Dimension	Definitions (all consequences of ES use)
Operational benefits	Operational benefits are usually reflected in cost reduction, cycle time reduction, productivity improvement, quality improvement, and improved customer service.
Managerial benefits	Improved management decision-making, e.g., improved allocation and control of an organization's resources, monitoring of operations, and support for strategic decisions.
Strategic benefits	Support for strategic action such as business growth, alliance, innovation, product differentiation, and external linkages.
IT Infrastructure benefits	Reduced IT costs, increased capability for quick and economic implementation of new applications, and enablement of greater organizational flexibility.
Organizational benefits	Consequences of ES use that make an organization more focused and cohesive, better at learning, and better at executing its chosen strategies.

Table 2. ES Benefit Dimensions (based on Shang and Seddon 2002)

RESEARCH METHODOLOGY

This study applies positivist case study methodology to build in-depth understanding of the international ES operation with guiding points and a theoretical framework for data collection. Positivist research seeks to explain and predict social phenomena by searching for regularity and causal relationships between constituent elements (Burrell and Morgan, 1979). International business operations are an area with multiple participants where different perceptions need to be verified and synthesized, which necessitates dynamic exploration into each different situation. Since survey results cannot present an objective and complete view of ES impacts, meticulous data collection in the presence of the researcher during the data collection process is considered essential: to clarify concepts and to ensure that the understanding of the concepts involved is consistent and precise across the subjects.

Based on the concept of international IS fit and ES benefits which is described in the previous section a seven-page questionnaire was designed to collect detailed information on the international ES practice. After a pre-test with three

business managers of international enterprises, some questions were modified to capture proper answer. The main change made to this questionnaire is to add two additional columns describing the international practice before and after the ES implementation.

Detailed data collection was conducted with four major international business operations. Data were collected from two types of enterprise system users of both headquarters and a core local unit: from major process managers and the ES project managers. Business managers are to provide information of business operations and business benefits and problems while ES managers were asked to provide information on the ES configuration and ES impact on the IT infrastructure. The data collection was executed under the control of researchers. Although the research framework provided an articulated questionnaire for data collection, open questions were asked with detailed case examples in order to build support for selected statements and to verify the linkage between the fit variables and consequent changes in performance. The fit of international ES was assessed and supported with analyzed case examples. The related impacts were then reviewed and described with supporting case data as well. Tables and graphs were used to consolidate findings and form patterns of the impacts of ES fit on both headquarters and local units.

	Enterprise A	Enterprise B	Enterprise C	Enterprise D
Industry	Service - software product	Manufacturing - machinery	Service - solution provider	Manufacturing - hi-tech OEM
Head office	U. S.	Taiwan	U. S.	Taiwan
International operation	50+ sites around the world	10+ sites in US. Europe, Asia, China	50+ sites around the world	10+ sites in US. Europe, Asia, China
Enterprise Systems	Oracle	SAP	SAP	Baan
Global processes	FI, sales, mkt, fulfillment	FI, sales, manufacturing, fulfillment	FI, sales, mkt, fulfillment, logistics	FI, sales, mkt, manufacturing, fulfillment, logistics
Years of use	3	2	2	3
Interviewed Head/local	2/2	4/2	2/2	2/2

Table 3. Descriptions of the Firms Interviewed

There are two concerns about the research design: the homogeneity of cases selected and the use of predefined benefit framework. First, the four cases selected tend to be in a similar type of operation - international or multinational with low pressure of international information. The risk is a lack of variance among the selected cases. Based on a preliminary review on the international ES user organizations, it is found that companies implemented international systems are mainly those planned to increase controls over the international resources and information. One of the objectives is to move from international or multinational operation to a global or transnational type of operation (the four types of international operations are depicted in figure 1). Companies with high autonomy and low international integration in their business units tend to let branches implement their own systems and seldom apply international ES project except for license advantages. Issues of task-technology fit in the local units remain a major challenge in these selected cases due to unique practice in different local environments and are planned for further examination in the next phase of research.

Second, the predefined list of ERP benefits for data collection may limit the scope for exploration. The advantage is that it provides structured framework for data collection so that precise information, instead of vague perceptions, can be documented and traced. The downside is the possibility of prejudged results. With open questions asked before and after each benefit dimension and data synthesized among interviewees the completeness and dynamics of the collected data is expected to be increased.

RESEARCH RESULT

The research result is summarized in Table 4 and 5. As shown in these tables, all the companies show a misfit between international operation and ES implementation. However, it is important to note that 1) these organizations had all achieved the expected benefits from this misfit ES, 2) and they all have transformed their international operation into an operation that fits the ES operation.

	Enterprise A	Enterprise B	Enterprise C	Enterprise D
International operation <i>before ES</i>	International	Multinational	International	International
ES implementation	Global	International	Global	Global/transnational
International operation <i>after ES</i>	Global	International	Global	Global/transnational
BPR implemented	No	Planned after ES implementation	Organizational restructured and process redesigned	Reorganized worldwide structure and processes
Impacts on head office and local business units (Head office/ Local business unit)				
Operational	3/2	2/2	3/3	5/5
Managerial	4/1	3/3	3/3	5/5
Strategic	1/0	1/1	2/2	5/4
IT infrastructure	5/2	2/2	3/2	5/5
Organizational	3/-1	1/0	3/3	3/2
Description of impacts on head office	<ul style="list-style-type: none"> Reduced cost and time Increased control Large IT savings Changed work pattern 	<ul style="list-style-type: none"> Some cost savings Improved global control Built external links Increased IT capability 	<ul style="list-style-type: none"> Reduced process time and costs Increased resource management flexibility Increased global visions 	<ul style="list-style-type: none"> Large cost savings Reduced cycle time Strategic WW supply chain Large IT savings Common vision
Description of impacts on local unit	<ul style="list-style-type: none"> Increased costs and work time Reduced responses to local needs Reduced IT costs Local work-around strategies 	<ul style="list-style-type: none"> Improved productivity Better resource control Support business alliance 	<ul style="list-style-type: none"> Improved productivity Support frequent but smooth business changes Increased global teamwork 	<ul style="list-style-type: none"> Reduced costs and cycle time Improved resource management Reduced IT costs

Table 4. International Operations and ES Implementation in the Four Cases

** The impacts of ES on the five business dimensions were ranked from 1 to 5 representing very low benefit to very high benefit.

Company A is headquartered in the United States and provides software products to local units around the world. Before the ES implementation, local business units managed marketing strategies, material procurement, and human resources. After the ES implementation, the organization became a global firm with the head office controlling all resource management

decisions including local hiring. The Oracle ERP system was configured to turn all the resource controls over to the head office (Table 5). The dramatic change was implemented to remove all local data centers and to centralize the database at the head office. The entire system was completely configured and maintained by the head office.

After two years, the head office identified several areas that showed great improvements: cost reduction, cycle time reduction in critical decision making, and quick and easy resource allocation. However, local business units had a different view of the system. They thought the integrated system had not yet created any savings but only extra work and delayed decisions on resource utilization.

ES dimensions	Enterprise A	Enterprise B	Enterprise C	Enterprise D
Locus of ES decision-making	Head office decided on everything	Head office decided on system selection, local office implemented the project	Head office decided on everything	Head office decided on everything with a select few from local units
Mode of operations	Centralized data center	Multiple but identical copies	Centralized data center	Multiple but identical copies
Development approach	Head office configured working modules for global use	Head office designed modules for global use and some development center designed modules	Head office configured working modules for global use	Head office configured working modules for global use and some local center developed modules
ES reporting	No local ES head	Local ES heads dotted line reporting	No local ES head only local process owners	Local ES head report to global ES head

Table 5. The ES Implementation of Companies Interviewed

Company B is an international provider of heavy electronic motors, headquartered in Taiwan with marketing and service subsidiaries in Australia, Asia, the United States, Europe, and China. The U.S. subsidiary was purchased ten years ago from a major electronics companies. This local unit ran its own factory with full decision-making power in marketing, processes and resource management. SAP was chosen to implement a world standard process infrastructure with some major modules developed in the head office and implemented and maintained by the local unit. Because the local unit remains autonomous in resource management, there is little resistance from the local unit and benefits of better information management was shared across head and local offices. However, to increase the collaborative work between head and local units company C is planning a process redesign program to increase world integration.

Company C's head office is in the United States and with regional offices in Europe and Asia. This company provides global system integration solution to Fortune 500 customers around the world. The implementation of ERP was well-planned two years before the system was implemented. It was a centralized process with the head office studying global and local needs and developing key components for regional offices. The regional offices then distributed the modules together with process education packages to local units. It was a phased implementation with financial and fulfillment modules implemented first. During the time of system configuration in the head office, many program changes were implemented in the regional offices to assist local units in its transfer from non-global-standard processes into global-consistent processes. From accumulated experiences of process redesign in different local units, issues were identified and solved, and some procedures were modified to make room for local responsiveness. The benefits were high and consistent among head and local units.

Company D's head office is in Taiwan, and it has subsidiaries in Europe, the US, and Asia. It provides a global end-to-end network of design, manufacturing and service operations to ICT (Information, communication and technology) companies. Organizational restructuring was planned as part of the ES implementation project.

The main goal was to centralize the global resources including material, products and design, and customer knowledge while coordinating processes among subsidiaries. Because many design projects were conducted among several subsidiaries and manufactured in different factories, the system was built to accommodate the network linkage among the worldwide points.

Although it was a lengthy and complicated job to restructure the subsidiaries, 12 factories in Europe were consolidated into 4 sites with design and manufacturing work allocated in different sites, with constant communication and persistent support from executives the project was implemented on time and within budget. It took more than a year to fine tune the system and to gain benefits. The results show that both head office and local units appreciated the benefits gained from the worldwide integrated system and the organization was able to accomplish more work for more customers.

DISCUSSION

With further analysis on the pattern of ES configuration and international operation and related results of the case studied, a few propositions were formed from this study:

- 1 ***A misfit between international ES configuration and business operation can still lead to successful implementation and beneficial system utilization if the after-implementation business operation fits the ES operation.***

As presented in Table 4 the misfit is noted between the organizational operation and ES implementation in the four firms. These firms have all implemented the systems on schedule and achieved benefits. It is understandable that the different aspects of business benefits and problems can not be compared among companies. Business results in this study were assessed based on the companies' planned goals and a comparison of the performances before and after the system implementation. No major failure was noted in these four firms and results were apparent and reflected in both public documents and transcript of interviews.

From the findings of this study, the time point of assessing the fit can affect the evaluation of fit. Most studies examined IT fit after the system was implemented and suggested fit between international operation and system implementation in the planning stage. However, in most cases the structure of international operation in the planning stage may not be the one the organization wishes to maintain. The modifications usually occur during the process change. Besides, the business operation could be dynamically affected after the implementation and use of a new system that is not fit results in instability. Contrary to the conventional wisdom of IT fit for success, this study provides a different view of IT fit that it is a constantly changing balance between the enterprise systems and the business operation. Assessment of different time points can have different perception of the fit. Maintaining ES fit is therefore a dynamic job with different business drives considered.

- 1 ***ES can be applied by international enterprises to transform the global operation.***

Although limited to four companies the study results display a pattern that organizations applied the ES to transform the organizational structure to either better resource-controlled or process-coordinated operation. Enterprise systems in these firms provided complimentary information and consolidated processes in the international operation so that the information flows globally, decisions are made effectively and operations run collaboratively. With the complimentary support of this globally integrated system the head offices are able to change the work pattern of international practice and build infrastructure for a more globally-linked organization. An enterprise system with its nature of information integration and level-modularization can be used as an enabler for global business transformation.

- 1 ***International ES implementation can run smoother if BPR is applied.***

Based on the analysis of the business results of the four international enterprises, company A suffered more than the other firms due to the conflicts between head and local offices. The differences of ES implementation seem to be the change in management.

Company A, changing from international to global, did not streamline the processes with local units and these units lost previous flexibility in responding to environment needs. Company B did not change the structure greatly, and the local units maintained a certain degree of autonomy. Therefore, both head office and local units perceived similar benefits and problems. However, the BPR plan is to gain more synergy between the office in the US and Taiwan. Whereas the restructured worldwide processes in Company C had already been in practice before the ES was in use. There was little resistance from the local business units and benefits were perceived consistently between head office and local units.

In the case of Company D the transformation from international operation to a globally-controlled and locally-networked organization has already been planned for years. Before the system was configured, the streamlined and enhanced processes, which strengthened the linkage among head office and local business units, had already been in practice for half a year. The ES implementation went smoothly and aligned opinions about benefit achievement were noted in both head office and the local business units.

Learning from the four cases, a well-planned process redesign with consideration of local adaptation during ES implementation is one of the critical factors for a beneficial international ES implementation.

CONCLUSION

This research project endeavored to provide insightful understanding of the management of international enterprise systems. Its aim is to investigate various aspects of the impacts of enterprise system fit on international business operations.

The key finding is that a misfit between the international operation and ES operation can still lead to great success if a) the ES is applied to transform the international operation and b) a well-planned process change was implemented in local business units before the systems was in use. Contrary to the general understanding that a fit between international operation and IS implementation can lead to implementation success, results of this study revealed that a misfit between the international operation and ES operation could bring even more benefits. A well-planned organizational restructuring process and process change program in preparing local units for the new processes is the key for international ES success.

Different types of international ES fit and misfit have different influences on the different areas of running a business in both the head office and local units. For example, in a globally-controlled firm, operational performance in the head office may be achieved because of tight control over local resources, while managerial performance in local units could be reduced due to a delay in response to local requests when local competition increases. On the other hand, a strategic drive for global competition could be enhanced through the collaboration of inter-organizational operations, with extra efforts in managing the increased negotiation power from local units in transnational-oriented firms. Meanwhile global information could enhance knowledge sharing among local units, with supplemental support for international and multinational firms to transform themselves into transnational-oriented organizations. An ES fit could bring benefits as well as problems in different business areas in the operation of international business.

The value of the study should be to assist business managers in diagnosing fit between international business operations and ES configuration with an insightful understanding of possible tradeoffs between the performance of head office and local needs. It is hoped that the accumulated intelligence of international ES management results can build up deep knowledge of the management of international enterprise systems and provide useful guidance to managers of international enterprise systems.

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