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The Introduction of ERP systems by Foreign Firms in China: Impact of Cultural Differences

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Abstract

Enterprise resource planning (ERP) systems are central to the Information Systems (IS) strategy of most international companies. With globalization, general managers put pressure on IS departments to implement such applications at a global level, in order to control and manage all the company processes at the different branches. Rolling out a global template in each of the different countries is risky as it does not take the local environment into account. Each country has its own specificities - organizational, cultural, political and economic - and these can have a real and important influence on the success of any new IS. This research aims to identify, through in-depth case studies, the cultural factors that influence the success of global ERP projects in China.

Key words: ERP, China, Culture, case study

1. Introduction/ General Background/ Potential Interests

ERP systems are at the centre of the strategic issues for most international companies. Due to globalization, general managers put pressure on IS departments to set up a consistent IS, at a global level, in order to control and manage all the company processes through the different branches and plants of the company. ERP systems are seen to be a suitable IS application, but are not universally effective. IS departments have to solve many issues to ensure the success of ERP systems. My early research suggests that, in this context of globalization, the most popular solution is to roll out a global template in the different countries and all related sites. This template is normally designed by the company IS headquarters. This solution is not without risk because it does not take into account the local environment.

One of my assumptions is that universal ERP systems can only be implemented in different countries successfully if misfits resulting from cultural differences are resolved. For example, business models, including the operating processes underlying western ERP software packages, reflect European and/or US industry practices. Such operating processes are likely to be different in Asian countries.

Focusing on those issues related to the globalization of ERP solutions presents multidisciplinary IS research work linked to the social sciences to understand cultural differences. It also explores potential impacts for IS implementation projects evolving in a foreign environment.

China is a good research environment for this study for many reasons: Chinese people use a different writing system with Chinese characters, but they are also in a different symbolic realm of myth, religion, values, metaphor and magic when compared to Europe and the United States. Furthermore, the economic model of China is interesting because the way they develop their own local economy is mainly based on a mix between Chinese local traditions and Western influences occurring since the Chinese economic reforms of 1980's. All those specificities about China mean that it may provide original and interesting case studies. Furthermore, the actual and forecasted growth of China place it first of the developing countries that will play a major role in the 21st century. Consequently for practitioners (ERP vendors and ERP customers), this research should provide useful insights to understand the importance of such cultural differences.

2. Research Scope and Question

This research work will focus on western companies which attempt to implement a global ERP system in their China subsidiaries. As the most commonly-used solution is the development of a worldwide template designed to headquarter requirements (processes, reporting, etc.), my research work aims to investigate what are the cultural factors that need to be considered for an improved success rate in implementing worldwide ERP systems in Chinese subsidiaries. Understanding and identifying such aspects may enable companies to be more proactive in planning for multinational ERP implementation in China (with potential implications elsewhere).

3. Related Work

Installing ERP systems globally has proven to be unexpectedly difficult, with the final benefits uncertain. Several researchers have concluded that failures are usually the result of business problems rather than technical difficulties (Davenport, 1998; Markus *et al.* 2000). The technical aspect of installing ERP systems is undoubtedly critical, but the management aspect of ERP systems could have an even greater impact on the success of the system or its use. Indeed, ERP is about 'the way of doing business', which is largely the result of a firm's strategy and culture. Davenport (1998) affirms that companies can lose their source of competitive advantage by adopting ERP systems that do not fit their business strategies. Indeed, ERP systems present more risks than ad-hoc software systems due to the high level of complexity and integration of the ERP with the company processes (Rowe, 1999).

Following identification of this high failure rate, numerous researches on Critical Success Factors (CSFs) in ERP implementation have been undertaken. A classification of those CSFs is established through 4 dimensions: structural, cultural, strategic and marketing. It seems that the cultural dimension is one of the most difficult to assimilate and it could explain why companies are still facing ERP failure. The "cultural" dimension can be analyzed at different levels such as:

- national,
- industry type, and
- organisational.

Markus et al. (2000) recognized the complexities of multi-site ERP implementation. They argued that when organizations are geographically dispersed, implementing ERP systems involves cross cultural managerial challenges. They suggested that multi-site implementation starts at the strategic level before proceeding to the technical level. Jacobs & Whybark (2000) expressed similar concerns. Besson (1999) argued that professional cultural differences can create conflicts, and resistance from the new IS coming from “overseas”. He gave the example that a financial module appropriate to Anglo-Saxon countries would create different issues if installed in France.

Several researchers discuss the cultural differences between Asian and Western countries in the context of implementing ERP systems. Sheu et al. (2003) emphasize national differences as one of the biggest threats and suggest the following categories of national differences as particularly important: language, culture, politics, regulations and management style. Similarly, Zhang et al. (2002) underlined the cultural differences between Western countries, where ERP systems are developed, and China, where these ERP systems are implemented.

This misalignment also has direct consequences for the introduction of ERP systems in China. Soh and Sia (2004) suggest that package customization may be an appropriate response to cultural misalignment in China. Jenganathan et al. (1997) prescribed modifying “appropriate modules” of Western production management software and developing “complementary modules” to suit Chinese conditions. Reimers (2002) studied the context variables which can influence an ERP implementation in China. He focused his research work on the impact of the ownership structure (including state-owned, foreign-invested and privately held firms) on the ERP implementation project results.

4. Theoretical Framework /Research Model

My research work is different from the work presented above for the following reasons. Firstly, it focuses only on western companies implementing an ERP system in their Chinese subsidiaries (most previous work studied local companies). Secondly, following structuration theory, my research will consider an ERP system as a Social System composed of agents and structures. This position is inspired from the work of Giddens (1984) and its “technology extension” from Orlikowski (1991). I see cultural specificities as a representation of the social structure realm.

My “hypothesis” is that, in the context of globalized economy, international firms trying to implement a generic worldwide IS are facing different social structure realms. Consequently, the “normal” process of structuration between agents and structures is disturbed by those different contexts. Indeed, the regulation process between the agents (on the one hand, the headquarters’ managers and western ERP developers and on the other hand, the Chinese employees from the subsidiaries) and the structures (on the one hand the headquarters’ western norms, rules and standards and on the other hand the Chinese norms, rules and standards) is unlikely to work successfully when foreign firms decide to implement a worldwide template at their Chinese subsidiaries.

Figure 1 below is a representation of this research proposition. This scheme shows how the headquarters’ desire for standardising on a global template may well conflict with the local conditions and also how these conflicts are likely to increase from European to Asian situations where cultural differences become more and more marked.

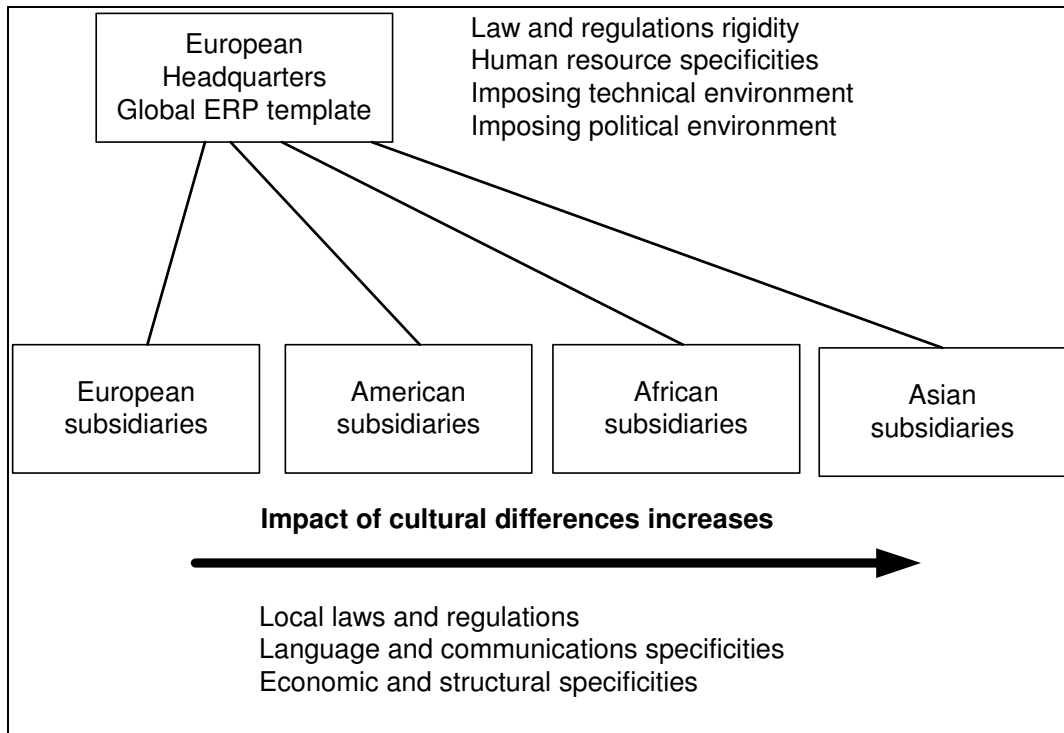


Figure 1: Impact of cultural differences on a global template

5. Methodological Framework

The first part of this research work is mainly focused on a literature review. By considering an ERP system as a social system, I am studying work in the social sciences along with IS literature. It may provide a rich source of knowledge and experience about the way to study this concept of “culture” and its impacts on global organizations.

Concerning data collection, I will focus on qualitative methods and particularly on case study research. The definition of Yin (2002) fits with my objective:

“A case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident.”

In practice, I plan to split my case studies into two distinct parts. In the first part, I will study the design of worldwide templates from the headquarters’ perspective by interviewing IS managers at headquarters from companies established in France. In the second part, I plan to go in China, on-site, in order to interview (using semi-structured interviews) the different actors of Chinese ERP implementations (ERP internal and external consultants, end-users and local managers). In both parts, I will also collect documents (reports, blueprints) to test the reliability of my different sources. This analysis in two parts is aimed at comparing the cultural differences between Western headquarters and Chinese subsidiaries.

Concerning the early case study findings, an initial study has been carried out and published as a case study (Avison and Malaurent, 2007) and the same case explored through the lens of structuration (Malaurent and Avison, submitted).

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