ELSEVIER

Journal of International Management
11 (2005) 163–186

THE FOX SCHOOL
of Business and Management
TEMPLE UNIVERSITY

Information systems for multinational enterprises—some factors at work in their design and implementation

Hans Lehmann[a,*], Brent Gallupe[b]

[a]*University of Auckland, New Zealand*
[b]*Queen's University, Kingston, Ontario, Canada*

Accepted 20 September 2004

Abstract

Information systems for multinational companies (MNCs), referred to as international information systems (IIS), have been a problem area for many years, yet have failed to attract more than token attention from the academic information systems research community. This study applies a grounded theory method to establish a first theoretical framework dealing with the structure of IIS and the dynamics of their development and implementation. The substantive theory is based on extensive, long-term work with three MNCs and covers four key areas: (a) the dealings between the actors concerned with an IIS take place in a force field; (b) the force field is reflected in a generic two-dimensional architecture an IIS, which always has a 'core' of systems used by all (or many) of the regions and 'local' systems, different at every regional site; (c) the balance of functionality between the 'core' and the 'local' parts of an IIS follows the degree to which the operations of the MNC require synchronous access to data and processing within the IIS. (d) The interactions of IT and users in the force field follow a cyclical, self-reinforcing dialectic such that an enforced consensus process is required in order to boost acceptance and to limit the probability that continuing rejection leads to catastrophic failure. The limitations of the theory are discussed and directions for future research are given.
© 2005 Elsevier Inc. All rights reserved.

Keywords: Global information systems; Multinational companies; Design of international information systems; Multi-factor design model for international information systems; Management of information technology for multinational companies; Implementation of international information systems

* Corresponding author.
E-mail address: h.lehmann@auckland.ac.nz (H. Lehmann).

1075-4253/$ - see front matter © 2005 Elsevier Inc. All rights reserved.
doi:10.1016/j.intman.2005.03.003

1. Introduction and research question

Two trends have dominated the world of business during the last three decades: globalisation and information technology. The fusion of these two driving forces, the application of information technology throughout global operations, however, has remained problematic (Huff, 1991). International information systems (IIS) are still largely misunderstood by practitioners (King and Sethi, 1993) and have long been outside the mainstream of academic research into information systems (Cash et al., 1992). As a result, IIS projects over the last 20 years have often been less than successful. Consulting firm KPMG Peat Marwick, in an in-depth survey of 80 European multinational companies (MNCs), found that by 1994 less than 10% of European firms had completed IIS development projects satisfactorily. Further evidence for these failures is now found inter alia in anthologies and monographs on large information systems failure, i.e. Glass (1992, 1998), Flowers (1996), Yourdon (1997) and Collins and Kirsch (1999), who adds a specific international focus.

Research into why these applications are so difficult and how they could be mastered should be of high priority, but is not. Over the last 30 years, the ProQuest database of academic periodicals lists 82,314 papers with "information systems" as a keyword. Of those, 309 articles have to do with information systems in international settings,[1] representing less than half of 1% of published IS research. In addition, nearly 40% of these papers deal with instances and issues of local information systems, but in a country other than the one the authors are resident in (Gallupe and Tan, 1999). This is a category that Palvia (1998) expressly excludes from the realm of global information technology research. This dearth of research has left the field somewhat short of a firm theoretical base. Such a base, however, is often the prerequisite for more applied research to provide sufficient relevance for practitioners' work. Given the history of large-scale failure and dysfunction of IIS, such research is critically needed.

The meagre theoretical backdrop, in turn, meant that the objectives of the research needed to be quite fundamental. They are expressed in two research questions:

> What factors, structures and processes influence the effectiveness of an IIS? and, secondly,
> How do such factors interact with each other?

In the following sections, an overview of the literature on IIS and related themes is given, followed by a description of the key points in the substantive theories developed from the case analyses. A discussion of the theory in the light of other knowledge in this and related fields together with some suggestions for further research concludes the paper.

2. International information systems in the literature

The term 'international information systems' (IIS) was coined by Buss (1982) and proved to be a better fit than the notion of 'common systems' created by Keen in the same

[1] This includes searches for combinations of related terms such as multi-national, trans-national, global, etc.

دریافت فوری ← متن کامل مقاله

ISIArticles
مرجع مقالات تخصصی ایران

✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
✓ امکان دانلود نسخه ترجمه شده مقالات
✓ پذیرش سفارش ترجمه تخصصی
✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
✓ دانلود فوری مقاله پس از پرداخت آنلاین
✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات