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ERP DREAMS AND SOUND BUSINESS RATIONALE

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Abstract

This paper reflects on some of the roots of the current ERP debate. Drawing from previous research and from an examination of ERP vendors’ claims, it highlights how the ERP market is characterised by a subtle but pervasive conflict between two fundamental discourses: the arguments put forward by ERP vendors and the perceptions and goals of managers in the organisations implementing ERPs. The paper documents the early stages of a larger research study, which is currently in progress into the selection process that organisations should follow when investing in ERP systems. The lessons from our investigation of key statements made about ERP systems by vendors and managers lead to the conclusion that the dialogue in relation to ERP must take place at a fundamentally different level, more concerned with the philosophical implications of the concept of ERP and less concerned with the benefits in principle of ERP packages. Also, the ERP market is not well served by the futuristic marketing visions put forward by vendors and far remote from the reality of what ERP systems are being used for in organisations.

Introduction

The ERP movement has been gathering momentum for the best part of ten years and has now reached a global dimension, with companies across the world and, more importantly, across very different industries jumping on the ERP band wagon. The pace of implementations has been such that SAP have posted on their web site the news that they have now implemented their software in 30,000 sites and have a user population of 10 million.

However, many studies have revealed that the rationale pursued by managers in acquiring ERP packages is not always very robust or very well informed (Wood and Caldas, 2000). Moreover, the track record of ERP implementations has not been consistently good with many examples of much advertised failures. Dell and Unisource have both written off their large investments in aborted SAP implementations (Bingi et al., 1999) and the FoxMeyer Drugs case study (Kalakota and Robinson, 1999) has become a kind of a SABRE landmark case study for ERP (only in a negative sense). The significance of such a case study cannot be understated because it shows a reasonably healthy company going bankrupt and losing its independence (it was bought by McKesson) after trying to implement a type of information systems widely advertised as being “the perfect solution” for companies who want to stay competitive (Wood and Caldas, 2000). More generally, few ERP implementations are actually entirely successful, with approximately half failing to meet the implementing organisations expectations due, for the most part to an underestimation of the effort involved in change management (Stefanou, 2000; Appleton, 1997). Furthermore, it is estimated that approximately 90% of ERP implementations end up over-time and over-budget, due to poor cost and time estimation (Kelly et al., 1999), and changes in project scope (Shanks et al., 2000).

These observations highlight the high level of risks associated with ERP implementations. However, further studies have observed that ERP implementations are more likely to be successful is companies follow a well-defined set of goals in their implementations (Adam and O’Doherty, 2000). The existence of a detailed set of targets, both in the short and long term, for the implementation of ERP is the only way that metrics can be developed for the purpose of reviewing the outcome of ERP investment decisions and that the achievement of organisational benefits can accurately be measured.
In this paper, we consider how the lack of a clear understanding of what ERP is about and of the business implications of the business models built into existing ERP packages, added to the lack of consistency in the discourse about ERP has drastic consequences on ERP implementations that have been carried out in organisations.

ERP Decision Making

The decision to acquire an ERP system and the selection process leading to it are becoming increasingly complex in a changing and competitive environment (Stefanou, 2000). Within an organisation the ERP selection processes should be undertaken by the usual means of determining the mandatory and desirable features required in a system, and then evaluating the various products according to these requirements (Stewart et al., 2000). However, these ‘usual means’ can only be undertaken if the organisation has a robust, unambiguous and complete set of selection criteria and a clear understanding of the products on offer. Failure to carry out a thorough analysis of business needs with an open mind will lead to the blind acceptance of the business models underlying the ERP packages currently on sale on the market with detrimental effects on the company and its operations (Wood and Caldas, 2000). Many organisations use the published specifications of the market leading ERP vendors, typically SAP, as a framework to analyse their own requirements and select the package they want to buy which is not in keeping with current thinking in IS development / acquisition. We think that this practice may result in a subtle but pervasive hijacking of the decision-making process within the corporation by the discursive imaginary of the ERP vendor. The end result may be the purchasing of ERP software for reasons other than these implicitly pursued by the organisation.

Information systems have long been thought off as vital business tools (Clemons and Row, 1991). But, when information technology – ERP packages in this case – is available to all firms, IS/IT cannot confer long-term competitive advantage over other firms. Furthermore, early adopters of ERP systems might not be in a better position if their followers benefit from their experiences and duplicate the system with newer technology and lower costs or avoid key obstacles to successful implementation. Clemons and Row (1991) have put forward the need for managers to create a link between applications of IT and specific complementary resources that could make the difference between temporary successful applications and long lasting competitive advantages defined as “the ability to earn returns on investment persistently above the average of the industry”. The aim is to avoid a situation where all competitors access the innovation and the same equilibrium of competitive forces is restored at a higher level of costs with no real benefits to anyone.

It is our contention that this need for a linkage between the content and business model underlying the ERP package and the unique assets of an organisation is crucial to the success of its implementation. In addition, we think that the quality of the analysis carried out at the earliest stage of ERP projects, which has received so little attention from researchers so far, is the primary factor in enabling companies to derive benefits from ERP over and beyond other firms. As described by Wood and Caldas (2000) too many firms acknowledged to having obtained no benefits at all from these costly ventures, a situation that is not acceptable from a management point of view and support Ward and Griffith’s (1996) earlier contention that investment justification is “a fiction” in 80% of IS projects.

Thus, the only way to get more benefit from an application is in successfully analysing the distinctive competence and the specific needs of the firm. As Lee and Adams (1991) put it:

if all firms could use a cookbook approach to identifying strategic use of IT, then none of these firms would hold an edge over other firms, It is a matter of concern that many existing applications presented as strategic by the literature have quickly turned to a necessity or competitive liability rather than a competitive advantage.

As Vitale et al. (1986) pointed out,

information technology can shape the firm's strategy only if consideration of information assets and opportunities is incorporated into the firm's strategic planning process in some way. Technological opportunities available in the market place (...) may permit short term strategic gains or catch-up moves. But to achieve defendable, long term strategic benefits, those external opportunities will probably have to be linked to unique assets currently among the company's resources.

This really emphasises the importance of the early stages in the decision making process of managers concerned that their firm’s efficiency should be improved. Failure to identify problems properly and to ensure that purchasing an ERP package is the best solution available, will result in the ERP package becoming what Lee and Adams call a competitive liability – an application which every company feel they need because all their competitors have one, but which no one can explain why it is needed.
Business Goals in ERP Projects

One of the most simple normative models, Simon’s (1977) four stage decision making process, breaks down the decision making process into (1) intelligence, (2) design, (3) choice and (4) review. The application of this model to current studies of ERP implementations is interesting because it reveals how few research projects have looked at the first and fourth phases and how this has not helped managers get a handle on what ERP systems are and what their implications for business processes are. It also shows the failure of both practice and research to follow a complete and independent thinking process from the identification of the organisational problems to the implementation of the purchased package. As Pomerol (1994) has remarked, the first phase of Simon’s process is critical in that alternatives not considered initially are very unlikely to be brought into the picture at a later stage. In relation to ERP projects, this first phase covers the decision to purchase an ERP system (one which is never studied in any detail) and the search for an ERP package that fit the current business model of the firm. For IS researchers who study the ERP phenomenon, it is critical to understand why managers decide to implement ERP packages in the first place and what alternatives they considered. ERP implementations are large and complex projects, the concept of ERP software being integrated (Kelly et al., 1999), and definitive targets must be pursued in the project, otherwise, the rationale for investing large amounts of capital, along with staff and management time and resources may be unjustified (Adam and O’Doherty, 2000). The long-standing decision making models, such as Simon’s (1977), which break the process into a number of phases have long highlighted how important proper analysis of decision problem (intelligence and design phase) are for the quality of the decision made. The phase of problem finding (c.f.: Pounds, 1969), where organisational actors identify stimuli in the environment which they come to perceive as problems requiring their attention, has not been a feature of many ERP projects. The approach of the year 2000 and the instruction of parent companies have been put forward as the most common stimuli in ERP projects and this does not fit the silver bullet image painted by ERP software vendors. If organisations truly went through a complete problem finding phase in their decisions to purchase ERP packages, they should reach the conclusion that ERP is the way to go in a vendor-independent, methodology-independent and pre-implementation thought process. This is not the case in many projects as bringing consultants in the company to organise the selection of existing ERP packages is often the first step in reported projects (Wood and Caldas, 2000; Caldas and Wood, 2000).

The start of any decision making process in relation to ERP should definitely be based on a clear vision for the future of the business and a resulting set of business goals. It can then be established whether an ERP package can help in achieving this vision and, ultimately, which ERP package will achieve this best.

Another feature of the ERP market that is not helping managers reaching informed decision and pursuing sound business rationales is that there is a mismatch between the discourse of software vendors and the expectations of managers. Vendors feel that they must always be one step ahead and keep changing the content of their message. No sooner is the ERP market established that they are shifting the goalposts and dressing up their offering with different colours. This does not help managers understand the implications of their choices as we discuss below. We first report on our investigation of the discursive strategies used in the web sites of leading ERP vendors, and, secondly, we look at some existing studies of the rationales pursued by managers in their ERP project to explore and highlight the lack of juxtaposition between the goals of the IT managers’ and the promises of the ERP vendors.

ERP Vendors Discourse

ERP vendors have been prompt to move away from the term ERP and a close examination of vendor web sites reveals that all suppliers of ERP have diversified in many areas of enterprise-wide systems. The new key words put forward by the largest ERP vendors are Supply Chain Management, Customer Relationship Management, Knowledge Management, Product Life Cycle Management or Business Intelligence. Crucially, they have also relabelled themselves as providers of ECommerce solutions and have updated their products so they can inter-operate with the web. Thus, under the motto “The best run E-Business run SAP”, SAP, for example, has created an image that is radically different from the image of the provider of back office operational software which is inherent in ERP. This new image is backed up by the claim that SAP has been in the business of E-Business for 28 years, that is to say since the creation of the company in 1972. Baan have followed a similar evolution with the latest family of products, designed for the Internet being renamed iBaan. JD Edwards has also joined the club of the E-Business providers and its web site features the question: “Is your supply chain stuck in a rut?” It also provide the answer to the question as follows: “Find out how to get it geared up for collaborative commerce” so you are “able to collaborate effectively with your partners, suppliers, and customers throughout your value chain”.

This shift in focus is interesting because it shows a future business world revolving entirely around E-Business and moving away from the more traditional business models which the vast majority of companies still rely upon. A closer inspection of the web sites actually quickly reveals that the success stories put forward by the vendors themselves are mostly about more traditional ERP
projects with an operational focus. In fact, only SAP put forward a number of success stories that involved E-Business solutions and those are mostly CRM oriented.

**Managers Discourse**

Wood and Caldas (2000) have found that managers bought ERP packages because of the need to integrate the organisation’s processes and information. Other reasons were that organisations were faced with pressures from head office and that they felt the need to follow current trend. Rather interestingly, they also found that a significant proportion of managers felt that their company did not exactly know what it was buying or what could be expected from the system.

This is somewhat contradicted by another study which reported that all companies in the sample investigated had implemented ERP for specific reasons (Adam and O’Doherty, 2000). These reasons were mostly about tackling the Y2K problem or replacing obsolete systems. They also included the provision of a reliable IS platform for the development of ecommerce activities, but only in 43% of cases and only as a “second phase” goal (meaning that managers thought about adding this goal only when they had started to implement their ERP and when they realised the potential for E-Business built into the products they had bought).

In the main, the rationale managers had to buy ERP systems was more on the operational side with 57% of companies pursing either cost / stock reduction strategies or seeking to rationalise their manufacturing processes.

**Conclusions and Further Studies**

Our research on the comparisons between the key statements made by ERP vendors and buyers, as mentioned above, is preliminary. More work is required in analysing the narratives that characterise the ERP movement at this point. There is also a need to explore in more the detail the very early stages of the managerial decision-making process regarding the acquisition of these complex informational systems. However, we can already intitate that our initial examination reveals a mismatch between the rationale emphasised by the vendors and the goals pursued by managers. Overall, the empirical evidence in relation to ERP implementations points to a lack of understanding of the difficulties that can arise when the business models used by organisations clash with the business models underlying the ERP packages implemented by these organisations. There seems to be a subtle but profound danger that the logic of the software package supplants the organizing logic of the corporation as a whole. Additionally, we can preliminarily conclude that the lack of focus on current issues, (as opposed to future issues such as E-Business), revealed in the web sites of ERP vendors may function as a clouding influence on managers' abilities to make informed decisions on the tough choices they face. Choices, that as painfully illustrated by the experience of some large companies, can result in both financial setbacks and loss of the clear vision needed to bring the relation of IT implementations and competitive advantages in the marketplace.

**References**


