

Chapter 5.3

Enterprise Systems, Control and Drift

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ABSTRACT

Enterprise Systems are widespread in current organizations and seen as integrating organizational procedures across functional divisions. An Enterprise System, once installed, seems to enable or constrain certain actions by users, which have an impact on organizational operations. Those actions may result in increased organizational control, or may lead to organizational drift. The processes that give rise to such outcomes are investigated in this chapter, which is based on a field study of five companies. By drawing on the theoretical concepts of human and machine agencies, as well as the embedding and disembedding of information in the system, this chapter argues

that control and drift arising from the use of an Enterprise System are outcomes of the processes of embedding and disembedding human actions, which are afforded (enabled or constrained) by the Enterprise System.

INTRODUCTION

Implementation of an Enterprise System (also known as Enterprise Resource Planning-ERP System) in an organization may have profound impact on organizational processes (Boudreau & Robey, 1999; Koch, 2001; Martin & Cheung, 2000; Schnederjans & Kim, 2003; Siriginidi, 2000), as well as on information flow and transparency (Bernroider & Koch, 1999; Besson & Rowe, 2001; Gattiker & Goodhue, 2004; Legare,

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2002; Markus & Tanis, 2000; Newell et al., 2003; Shang & Seddon, 2000). Much of the research in Enterprise Systems however, is concerned with the implementation process and providing insights into success factors of Enterprise Systems implementation (e.g. Akkermans & van Helden, 2002; Al-Mashari & Al-Mudimigh, 2003; Bingi et al., 1999; Holland & Light, 1999; Hong & Kim, 2002; Nah et al., 2001; Shanks et al., 2000; Somers & Nelson, 2001). Only a few studies investigate issues relating to the post implementation of ES (e.g. Elmes et al., 2005). Hence we have limited understanding of issues affecting the use of Enterprise Systems in organizations and their potential for organizational impact.

This chapter therefore concentrates on the actual use of an Enterprise System, post-implementation. It examines the impact of actions performed by humans (users), or a machine (the Enterprise System), on control and drift within an organization. We propose a theoretical conceptualisation to describe the impact of those actions by drawing on a field study of five companies that have an Enterprise Resource Planning System installed. The significance of this research is twofold. First, our conceptualisation developed in this chapter enhances the understanding of the processes that result in organizational control (or drift) through the use of an Enterprise System. Second, our results also pinpoint issues of practical interest to companies that are using (or thinking of installing) an Enterprise System.

Although ERP systems were originally designed to be used within an organization, in the last years they have evolved considerably to include or link with external functionalities such as Customer Relationship Management (CRM), Supply Chain Management (SCM) and e-business (B2B and B2C). The current trend is also to repackage ERP systems as a collection of interoperable modules with standards-based interfaces, in accordance with the mandates of Service-Oriented Architectures. The examination of ERP systems in this chapter however only

looked at internal operations, and the use of such systems referred only to internal actors, without examining external linkages, which was beyond the purposes of this research.

The rest of the chapter is structured as follows: in the following section, we review the relevant literature on Information Systems, control and drift, as well as human agency, which are topics central to our research. We then present our theoretical foundations, in which we frame our analysis and discussion. Our research approach is then outlined, followed by a description of the companies that participated in this research. We follow this with an analysis of the data gathered from the companies, across the dimensions of control and drift. We then discuss our findings and present our conceptualisation of Enterprise System use, and conclude with some theoretical and practical implications of our research.

LITERATURE REVIEW

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The link of Information Systems with organizational control has been investigated by a variety of scholars in the field (e.g. Coombs et al., 1992; Duane & Finnegan, 2003; Malone, 1997; Tang et al., 2000). Many point to the paradox that while Information Systems can empower employees with increased decision-making capabilities, at the same time they can serve to increase control within the organization (e.g. Bloomfield & Coombs, 1992; Bloomfield et al., 1994; Orlikowski, 1991).

Although control in a general information systems setting has been examined to a large extent, the number of studies in an Enterprise Systems setting in particular is still quite limited. What distinguishes Enterprise Systems from other Information Systems is their scale, complexity, and potential for organizational impact. Because of this, they deserve special attention with regards

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