Enterprise resource planning (ERP) projects are considered to be expensive, time-consuming, difficult to manage, and extremely risky. ERP projects are risky from strategic, operational, technical and organisational perspectives. Risks and critical success factors of ERP projects have been widely studied, and the management of risks is a key to a successful ERP project. Generic risk analyses have faced inflation, and in the worst case companies do not manage risks in their ERP project at all.

This paper presents the risks in their ERP project. Focus is on small and medium-sized enterprises (SMEs), because they often have limited resources and competencies for analyzing and managing ERP project risks. In this paper we reflect our results to some of the previous studies of ERP project risks in order to present a new approach to ERP risks. Qualitative case study of three SMEs gives empirical evidence to our view to ERP risks. As a result we state that in addition to generic project management risks there should be assessed also company specific risks which, in fact, are usually the fundamental issues that should be considered in the early phase of the ERP project.

Keywords: ERP, Risk management, SME.

1 INTRODUCTION

SMEs are willing to implement ERP systems to develop their operations in order to get benefits in business. In some cases the pressure towards ERP solutions comes from larger co-operating partners. ERP implementation is a complex project which includes many critical phases before it is successfully in use. Currently ERP projects, their failures and success factors, are mainly studied at larger companies. It is understandable, as in the past these companies were the ones that invested in large information systems. Currently, as SMEs’ buy ERP systems, the special characteristics of these, has to be understood and proper risk management tools are needed to SME context.

It is a known fact by practitioners and researchers that many ERP projects are interpreted to be failures. IT investments, especially large as ERP systems, are difficult as the SMEs’ do not have resources to involve in the system projects. Many projects have faced the situation that at least some of the goals in the projects were not met. This stresses the importance of understanding the risks concerning the ERP projects. In many cases it seems to be that even rather simple ERP risk management solution would have been helpful in order to avoid the most typical pitfalls in the project.

The main goal of the paper is to present an analysis of the early phase risks in SMEs’ ERP projects. This goal includes several sub-topics to be discussed at least in some extent. Firstly, the characteristics of SMEs’ as ERP buyers are under exploration. Secondly, the actual risks found out in case companies are presented. Information gathered in cases and literature, have created the basis for the risk analysis presented in the paper.

2 ERP PROJECT RISK THEORY

SME firms are in different position regarding ERP systems as they have limited resources to be able to tie into a significant IT project. They for example, don’t have possibilities to hire full time project manager to the job. On the other hand, they don’t often have enough skills and knowledge of IT solutions and sourcing these. The requirements for the ERP are also differing compared to larger companies for example no or limited skills (Kettunen & Simons 2001), limited resources (no full time project manager) and special requirements to the system compared to large companies.

Several studies have explored this issue. Taylor (2005) studied 22 project managers ERP project risk from the point of view of IT resource provider. Sumner presents a list of risk factors in ERP provider. Main topics in the list are organizational fit, skill mix, management structure and strategy, software system design, user involvement and training, technology planning and project management.
3 RESEARCH METHOD

In our research we made an in-depth case study in three firms, where were used data collecting methods like interviews, observation and workshops.

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*In firm C the risk issues were covered in first round interview

Table 1 Research accomplishment in case firms, persons involved in the phases

All three firms have in common a need to renew their information system in order to better accomplish their operations now and especially in the future. The need for new system has grown internally in the companies because of the problems at current system(s) and for example poor usability of systems and complex historically developed system structure.

Firm A is a manufacturer of a complex chemical product, which includes production phases from process production in early production phases to batch production in latter part of production.

Firm B is a project oriented company, which expertise is in specific industrial assembly operations. These projects are done mainly on customers’ site when process equipment is built, re-built or fixed in factories.

Firm C mainly earns its revenues in doing projects in planning and installing equipment to its customers’ production facilities. In fact, in this case we studied only one business unit of this company and even this business unit is separated to three sub-units. Businesses are different varying from contract manufacturing to selling knowledge and work of design engineers.

4 CASE STUDY RESULTS

The three case companies represent seem to be rather typical SMEs that are planning of making an ERP investment in the near future. Firms have rather limited resources to put into this project and do not have opportunities and understanding to research all ERP projects essential issues themselves. External experts are needed in order to support the firm capabilities to become more professional system buyers.

Information technology is one key area when companies are developing their business and search possibilities for more efficient operations. ERP solutions often seem to promise a full scale service to answer all possible information needs in a company. The range of systems and their differences are hard to understand even in larger companies which do have significant amount of knowledge and resources to develop and analyze the information needs and different solutions for those. The case in SMEs is rather different. SMEs don’t have large IT departments and many skilled personnel available for the ERP-project.

In two case companies a vast amount of different information systems is a clear challenge. Today one system is used for wages, one for maintenance, one for bookkeeping etc. Whole system is complex and there are multiple links between different systems. Data is not easily available and automatically generated from this jungle of systems.

It is evident that today also smaller companies are interested in the ERP solutions. Sourcing of these is still rather complex issue and involves multitude of potential problems. One of the key challenges in the ERP-project is the need to assess critically the whole company’s operations. The ERP project is a large-scale change process to many business processes and involves almost every employee. Firm’s context sets some crucial limitations and evident potential problems which have to be taken into account in the project.

Our suggestion is that already at the beginning the risks should be evaluated throughout the whole ERP project. Identifying and assessing implementation and usage phase risks are essential when considering the system choice. The most important issue in the successful ERP project is the understanding of the company’s business and context requirements.
References

