The missing fit between ERP system and organizational structures

A qualitative case study of the implementation of PRIO in the Swedish Armed Forces

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ABSTRACT

ERP systems which initially were developed for manufacturing organizations have in recent years spread to public sector organization. It is put forward that public sector organization differ from private organization and this might affect how successfully an ERP system is implemented. ERP systems are rarely studied in public sector organization and few researchers have explored the fit between ERP system and organizational structures. Therefore, the purpose of this paper is to explore what relationship that exists or do not exist between ERP system and organizational social structures in a military organization, and how this has affected the implementation and use. This is done through a qualitative case study of the Swedish Armed Forces with data from semi-structured interviews with 14 platoon commanders and 3 company commanders. The findings suggest that there is a misfit between the ERP system, PRIO, and the social structures in the organization which have made the implementation and use problematic. The technical shortcomings, such as the user interface, are not the main problem and employees might have been negative about the system anyway. This since platoon commanders and company commanders do not think platoon commanders are the best suited to do the tasks with PRIO.

Keywords: ERP system, organizational social structures, public sector organization, structuration theory.

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I. INTRODUCTION

“The Swedish Armed Forces have feebleness for Kinder Surprise egg solutions and major technology leaps. PRIO is a system that should handle everything but it assumes both full control and perfect people. Thus, a system made not to work” (SvD, 2012).

This is one of many comments in media regarding the implementation of the Swedish Armed Forces’ new enterprise resource planning system (ERP system), called PRIO from the Germany company SAP. The implementation of PRIO, has been subject for a controversial debate followed by headlines such as “Tell us about your very best PRIO story” (SvD, 2012) and “The Armed Forces’ big fiasco” (VA, 2012). Also, in June 2011, a report regarding PRIO was published were 5075 employees (15 000 employees were asked) participated in a survey. Employees with different ranks and positions participated and the report demonstrates that only 12 % feel that PRIO facilitates their work and only 25 % are positive about the system (Officerstidningen no. 6, 2012).

The Swedish Armed Forces are far from the only organization which has implemented an ERP system. During the 1990s, ERP systems became popular (Turner & Weickgenannt, 2008) and it may in fact be one of the most important developments regarding information technology in the corporate world during that time (Davenport, 1998). Due to globalization and a growing competitive business environment, organizations have in recent years been forced to implement ERP systems in order to stay competitive (Karsak & Özogul, 2009). An ERP system is a comprehensive software package that enables an organization to integrate all business functions and its data throughout the entire organization. This provides a complete view of the organization. (Davenport, 1998; Klaus et al., 2000) ERP systems are offered by several vendors specialized in software packages and the software market has become a multi-billion dollar industry (Klaus et al., 2000). The German company SAP is the world's largest business software company in terms of market share, with competitors such as Oracle and Sage (Forbes, 2012).

The characteristics of an ERP system may provide many benefits such as increased productivity and better control over the organization (Davenport, 1998). As an ERP system uses one single database it enhances the possibility for sharing information between processes and among different business areas (Turner & Weickgenannt, 2008). Therefore, an organization can benefit from implementing an ERP system since it tightly integrates various departments of the organization (Bingi et al., 1999).
However, during the last couple of years, the image of ERP systems seems to have changed from a highly promising into a very demanding system with a growing number of stories about failed projects (Boersma & Kingma, 2005; Davenport, 1998). As the intent with an ERP system is to integrate all business functions, an ERP system becomes enormously in scope, size and complexity. This can make the implementation very time consuming, involving high costs and disrupt current processes and operations. (Turner & Weickgenannt, 2008) The decision to implement an ERP system implies a vast investment (Davenport, 1998; Bingi et al., 1999) estimated to cost approximately 100 million dollars for a large organization. Apart from the original implementation, the system also needs updates which are time consuming and comprises additional costs. Since processes are integrated, they also affect and trigger each other. Therefore, it is important to make sure that processes are triggered in the correct amount and at the right time which can be complex to manage. (Turner & Weickgenannt, 2008)

Another issue with ERP packages is that they are very general (Bingi et al., 1999) and mainly a standard solution offered by the software companies. Vendors try to structure the system to reflect best practices and the ERP design is based on assumptions about the way organizations operate in general. By this, it is the vendor that defines what the “best” way is and not the customer who often have the “best” knowledge about the organization and its processes. (Davenport, 1998) However, some degree of customization of an ERP system is possible. Organizations can for example chose to implement modules that are appropriate to its business but the system’s complexity makes it difficult to do major modifications. This customization also takes time, depending on the specific requirements from the organization. The more customization needed, the more it will cost to keep it up-to-date. (Turner & Weickgenannt, 2008) For that reason, many organizations are instead required to adapt the organization and its processes to the system. This may be beneficial to some organizations but not appropriate for all (Davenport, 1998).

Because of the potential benefits top management is often interested in implementing ERP systems without understanding the misfit between the organization and the system (Morton & Hu, 2008). ERP systems were initially developed for manufacturing organizations and the interest have mainly been from private organizations (Alves and Matos, 2011). However, in recent years, the interest of implementing ERP systems have also spread to public sector organizations who have invested significant resources in implementing ERP systems (Chang et al., 2000). This interest from public sector organizations to implement
ERP systems can be related to the shift in public management, referred to as New Public Management (NPM). During the last two decades, this shift has been present in many countries globally. (Noblet et al., 2006) The underlying principles of NPM are according to Williams et al. (2011) managerialism and the use of indirect control. The change towards NPM are a result from demands of increased efficiency, effectiveness and quality in public sector environment coming with an increased demand to use modern technologies, be result oriented, and adopt professional management practices (Noblet et al., 2006; Williams et al., 2011). NPM transforms the public sector from a Weberian bureaucratic organization to instead perform like private sector organizations (Williams et al., 2011). DiMaggio and Powell (1983) argues that consultants try to force these new reforms on public sector organizations, arguing that the changes are necessary if the organization should have any chance to look professional and business minded. Hence, there is a problem which can occur in public sector organizations when letting consultants implement new reforms. These new reforms are in many cases not aimed to fit public sector organizations. (Brunsson & Sahlin-Andersson, 2000)

Heintze and Bretschneider (2000) argue that public sector organizations are different from private organizations at three levels - individual, organizational and environmental. At the individual level, employees and managers in a public sector organization can have different incentives than those in a private organization, such as how they identify themselves with the organization and the level of satisfaction with their work. At the organizational level, public sector organizations have more rigid structures and often more paperwork. These rigid structures include strict hierarchies with vertical channels for power, decisions making and communication as well as high amounts of authority to those in the top of the hierarchy (Hatch & Cunliffe, 2006). At the environmental level, public sector organizations are more influenced by the political environment than organizations in the private sector that are to a larger extent more influenced by the economic environment involving pressure of short-term goals and performance (Heintze & Bretschneider, 2000).

According to these differences in individual, organizational and environmental levels (Heintze & Bretschneider, 2000), changes towards NPM do not just come with changes in management practice, new techniques and increased performance (Noblet et al., 2006; Williams et al., 2011). These new ways of working can affect organizational structures (Bingi et al., 1999; Parker & Bradley, 2000), which in turn can have impact on employees and their work environment (Nobelt et al., 2006). Such changes can present employees with new
situations, ambiguity, and new challenges which often results in negative influences for instance stress, dissatisfaction, and declining levels of organizational commitment (Agboola & Salawu, 2011; Nobelt et al., 2006). When current structures differ from the information technology system it might lead to dramatically changes in the organization which can generate obstacles (Dillard & Yuthas, 2006). Research has revealed that changes induced by information technology in different kinds of organizations have in many situations resulted in resistance from employees (Kling & Iacono, 1989). Therefore it is important to regard the implementation processes of ERP systems as both a large technological and organizational change (Davenport, 1998).

Whether or not an organization will generate the benefits from an ERP system depends on how successfully they manage to implement it (Turner & Weickgenannt, 2008). Due to the growing stories of failed ERP implementations, several researchers have put forward critical success factors for implementing an ERP system (Bhatti, 2005; Holland & Light, 1999; Zhang et al., 2002). However, Morton & Hu (2008) argues that few researchers have explored the fit between organizational structures and ERP system from a strong theoretical lens. They argue that it is of significant importance for researchers and practitioners to understand which types of organization that may fit with ERP system and which organizations that may face broader challenges. This is interesting to study since public sector organizations often differ from private sector organizations in for example organizational structures (Heintze & Bretschneider, 2000). Additionally, the literature on ERP systems are rarely studied in public sector organizations (Alves & Matos, 2011). Therefore, this paper explores what relationship that exists or do not exist between ERP system and organizational social structures in the Swedish Armed Forces. In doing so, we hope that this study can help to contribute to existing research and narrow the research gap. The research question of this study is formulated as follows: What relationship exists or do not exist between ERP system and organizational social structures in a military organization and how have this affected the implementation and use?
The rest of the paper is organized as follows: First, the research setting is described, containing the case study organization, the Swedish Armed Forces. Second, the literature review is presented, including a review of the literature on ERP system failure and critical success factors, theories and perspectives describing the concept of organizational social structures, theories of different ways to understand the relationship between technology and organizations as well as between technology and organizational social structures. Thereafter, the research methodology is presented. The paper further presents the empirical findings which then are analysed through a theoretical lens. Lastly the conclusions and limitations of the study are put forward together with suggestions of further research.

II. THE RESEARCH SETTING

The case study organization, the Swedish Armed Forces is one of the largest state authority in Sweden with a budget of approximately SEK 40 billion and 27 623 people employed considering figures presented December 31, 2012. Among the people employed there are 9540 officers in active duty, 6567 civilian employees, and 4487 squad commanders, soldiers and seamen1 (Försvarsmakten a, 2013). The Swedish Armed Forces is right now going through pervasive organizational changes with the aim to provide increased capability with available and flexible response units accessible for service both home and abroad (Försvarsmakten b, 2013). This can be related to the fact that armed forces in the western industrial democracies are facing wide-ranging challenges, which is a result of the past 15 year’s radical changes in the context where they operate. Since the end of the cold war, the situation in Europe has changed to a continent of collaboration where almost all the countries in Europe is a member of as well as EU and NATO. (Ydén et al., 2005) In year 2010, the Swedish Armed Forces also went from conscription to a professional military force (NE, 2013).

In year 2009, the Swedish Armed Forces started to implement an ERP system from the German software company SAP, named PRIO, in order to respond to requirements from the Swedish parliament and government of more effective organization with better internal and external control over personnel, equipment and financial assets. By implementing PRIO, this is realized through a more uniformed and more effective way of working. (Försvarsmakten

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1 Numbers excluding 6926 officers of the reserve, 103 officers of the reserve in active duty, and former conscripts still assigned to combat units.
As mentioned, in media the implementation of PRIO has been subject for a controversial debate. A report demonstrated that few employees think PRIO facilitates their work (Officerstidningen no. 6, 2012). Further, the costs of implementing PRIO have been discussed. In June 2010, the Office of Public Management published a report with an investigation of the implementation of PRIO. The report reveals that, even if certain parts of the costs are classified or not yet possible to compute, the costs specified are close to SEK 4 billion which is approximately SEK 1.5 billion more than earlier specified. The Office of Public Management considers this as a noteworthy large increase in costs. (Statskontoret, 2010)

The organization have simultaneously done a HR-transformation which imply a new way of working at local and higher level and the manager and employer role have changed (Försvarsmakten c, 2009). Managers at all levels have got changed responsibilities for their subordinates (Försvarsmaktem HKV Ledningsstabens PRIO-avdelning, 2013) and PRIO provides new possibilities to control and follow up a complex and important personnel supply process (Försvarsmakten c, 2009). The organization have also cut personnel from support functions (those handling local renting, supply and storage, personnel working at the firing ranges, HR-personnel, salary administrators etc.) and are letting platoon commanders and company commanders do those tasks instead (CC3, 2013). In the Swedish Armed Forces monthly magazine, an article was published with the headline “Dangerous in military action or an extremely well-trained (muscle-bound) administrator?” In the article, there is a discussion about the education of Officers and that the education today is partly going against directives in real working life at troop level. One example from the article is described as follows: “Why does not a tactical company commander have 40 credits PRIO-knowledge at the three year education at Officershögskolan (college school for Officers)?” Since a Tactical Operating Officer spend 20-50 % of the total work time with that system. (Officerstidningen no. 2, 2013)

**PRIO IN SIX PHASES**

PRIO is implemented in six projects separated in time. In the first project, all basic data within the area of economy and HR, such as accounting, budgeting and the administration of personnel, including reporting related to work such as travel orders and working time, was set into the new system. The project was delivered January 19, 2009. In the second phase, which

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2 One of the company commanders interviewed in this study. See Table 1.
was delivered April 6, 2012, the implementation continued by integrating the military units and schools. The third phase integrated the logistics to PRIO, which for instance covers fuel, spares and expendable supplies. The fourth phase implicated new functions for the HR department and was delivered last year, February 17, 2012. The fifth and sixth phase started during spring 2012 and includes further business services within the area of logistics, for instance real estate, supplying of the troops, data management and maintenance of equipment. In this phase of the implementation, all units, schools, staffs and centres are involved. (Försvarsmakten d, 2012) In this study the focus is mainly on the first and second phase of the implementation, but also to some extent the third phase. Further, this study focuses mainly on managers with staff liability at the lowest level, the platoon commanders who have responsibility for subordinates, but to some extent focus is also on company commanders who have platoon commanders as their subordinates.

III. LITERATURE REVIEW

ERP SYSTEM FAILURE AND CRITICAL SUCCESS FACTORS

Lorenzi and Riley (2003) argue that there are several reasons for failures when implementing an ERP system and it is therefore difficult to point out one single cause. Instead they have noticed “a snowball effect” where a shortcoming in one area results in shortcomings in other areas. These multiple reasons for failures connected to implementation of ERP systems as well as factors important for success are crucial to understand to facilitate the process. A common reason creating problems during the implementation of an ERP system is that the organization often underestimates the complexity of the system, which can lead to cost overruns and missed deadlines. (Lorenzi & Riley, 2003) Therefore, risk management as well as time and cost parameters such as how long time the implementation will take, implementation costs, the ERP vendors and the ERP consultants involved in the project are critical success factors to be aware of (Bhatti, 2005; Bingi et al., 1999).

Holland and Light (1999) stress that critical success factors are related to software configuration, legacy system and ERP strategy. Important are also business process reengineering as well as change management (Bhatti, 2005). Another important area related to critical success factors are project management such as top management commitment, support and a clear vision (Bhatti, 2005; Bingi et al., 1999; Holland & Light, 1999; Zhang et al., 2002). Top management have to ask themselves several questions such as what strategic
implications the system will have and if there are any alternatives except from implementing an ERP system that might better fit the needs of the organization. Management commitment and support is facilitated through well-functioning communication channels.

Lack in communication, for example ineffective outgoing communication, ineffective listening or failure from management to effectively prepare employees for the new system, is one of the reasons for failure (Lorenzi & Riley, 2003). Therefore effective communication as well as goals and objectives are critical success factors important to take into consideration (Bhatti, 2005). Also, to facilitate the change process, Zhang et al. (2002) argues that there should be trust between top management and the employees. New systems often come with new structures such as new roles and responsibilities. These new roles and responsibilities have to be clearly defined and well communicated. If there is lack in communication or the definitions are weak, employees might not understand the new roles and responsibilities. Therefore, this can lead to a failing implementation process. (Lorenzi & Riley, 2003) Also, in an ERP implementation process education and training of employees are crucial (Bhatti, 2005; Bingi et al., 1999; Zhang et al., 2002) as well as involvement of employees (Bhatti, 2005). Important are also the selection of employees that can be dedicated to the project (Bhatti, 2005; Bingi et al., 1999).

**ORGANIZATIONAL SOCIAL STRUCTURES**

An organization can be defined as organizational social structures, technologies, organizational physical structures and organizational culture that exist within an organization which also respond to an environment. These concepts or the theories and perspective associated with them are not complete in itself, and each of them shares some aspects with the others. (Hatch & Cunliffe, 2006) To the right, Figure 1. illustrates how these concepts, or the theories and perspective associated with them are interrelated. Organizational social structures and organizational physical structures overlap in the way as “people have both physical bodies and social identities” (Hatch & Cunliffe, 2006, p. 101). Organizational social structure
refers to the relationship between people within the organization and organizational physical structure refers to buildings and geographical locations (Hatch & Cunliffe, 2006). In this paper, the interest is on organizational social structures. But even if focus is on organizational social structures, it is important to understand and point out that those theories and perspectives around this concept also share aspects with theories concerning the other concepts.

The origins of the organizational social structure concept derive from Max Weber. Organizational theorists have, based on Weber’s theory identified three basic components of organizational social structures: the hierarchy of authority, the division of labour and formalized rules and procedures. (Hatch & Cunliffe, 2006) Formalized rules and procedures depend on to what extent explicit rules, regulations, and procedures control the organizational activities. Division of labour is concerned with how responsibilities and assignments of tasks are distributed within the organization (Hatch & Cunliffe, 2006) as well as the roles employees have (Fleetwood, 2008). It also involves the way jobs are grouped into organizational units such as different departments. In departments, similar activities may be grouped together. The hierarchy of authority is visible in the distribution of authority and the structure of reporting (Hatch & Cunliffe, 2006). In a centralized organization, decision making is concentrated at higher levels compared to a decentralized organization where decision making is put at lower levels (Zábojník, 2002). When changing the way work is divided, the responsibilities and assignments employees have (division of labour), or the way the hierarchy are constructed, the total output of the organizations work will be changed. Therefore, to correctly distribute responsibilities and assignments among employees is essential when to create a situation where the output of the organization will be at its best (Hatch & Cunliffe, 2006).

Researchers have developed different perspectives on organizational social structures (Hatch & Cunliffe, 2006) and there is no single definition (Lopez & Scott, cited in Nairn, 2009, p.193). To further develop an understanding of organizational social structures, Giddens (1984) is one researcher that provides an explanation of the concept with his Structuration theory. Giddens (1984) describe how structure both constrain and enable the activities of individuals. In other words people are dependent on, and at the same time creating structures (Bratttorteg & Gregory, 1999; Jones & Karsten, 2008). Individuals construct structures and act according to those, telling themselves they cannot act in other ways. Individuals see the structures as something fixed that cannot be changed and they fail to realize they are the ones
creating the structures which also imply that they are the ones who can change them. What prevent individuals from doing so are their own habits, routines and expectations. (Hatch & Cunliffe, 2006) Individuals consciously take social structures into consideration when they reflect upon potential ways of action (Fleetwood, 2008). This relationship between individuals and structures are described by Giddens (1984) as a duality.

Giddens (1984) explain how the duality between individuals and structure can be describe in three dualities, where each of them is arbitrated by different types of rules and resources which individuals use to create their structural context. These three are the following; first, signification-communication which is arbitrated by interpretive schemes. Second, domination-power which is arbitrated by relationships within which power is exercised. Third, legitimation-sanction which is arbitrated by normative influence. The rules and resources of these three dualities provide an understanding of how organizational social structures appear in an organization. (Hatch & Cunliffe, 2006)

Interpretive schemes are used to define the meaning of symbols for example language games in which employees in an organization develop a shared vocabulary. Organizational social structures can therefore consists of the language individual use, the shared way of talking or communicating which can be different from those in other organizations (Hatch & Cunliffe, 2006). The relationship within which power is exercised could be explained in for example the hierarchy in an organization, if decision making is centralized or decentralized. It also involved the division of labour, how assignments and responsibilities are divided among employees. Normative influences can be described as norms which are found in socialization (Hatch & Cunliffe, 2006). Norms are the individuals’ expectations of one’s rights and duties (Wanyama & Zheng, 2011). Norms can also be described as prevailing modes of conduct that dictate what behaviour that individuals in an organization can enact (Lapinski & Rimal, 2005). Similarly, norms are rules of conduct which define what should and should not be done by different individuals in different kinds of situations (Williams, cited in Gibbs, 1965, p.857).

The discussion about organizational social structures is more or less connected with some specific terms. Theses specific terms which are commonly used are; habits, rules, norms, values, roles, regulations, practices, routines and procedures. Less commonly used terms, but still connected to organizational social structure, are; mores, rituals, and agreements. (Fleetwood, 2008) This study does not intend to use all the commonly used terms, instead
only those terms suitable for the purpose of the study are used. Therefore, developed from those certain ideas and understandings about the concept elaborated above this study are particularly concerned with the terms: the division of labour, roles, language and norms. These terms are used as a theoretical lens to help explore what relationship that exists or do not exist between ERP system and organizational social structures in a military organization, and how this has affected the implementation and use. Research in what role technology can have in organizations as well as the relationship between technology and organizational social structures is further described below.

TECHNOLOGY AND ORGANIZATION

Over the years, several researchers have been interested in defining what role technology has in organizations, how it changes organizations and how it affects the employees (Orlikowski, 2000). The early work of Leavitt (1973) is one example in which an organization can be viewed through a diamond shape of components, consisting of tasks, structure, people and technology. These factors interact and adjust in social systems of complex nature and are mutually dependent of each other. Through interaction, the factors become important where for instance a change in technology comes with changes in structure and tasks. (Leavitt et al., 1973) In other words, changing the organization’s technology automatically triggers other changes in the organization (Sarker, 2000).

Closely linked to Leavitt’s work is what is known as the socio-technical school (Bostrom & Heinen, 1977; Markus, 1983; Robey, 1987) which has been developed from Leavitt’s diamond model. Bostrom and Heinen (1977) have applied Leavitt’s model to information systems and describe how the theory represents two systems, a technical and a social system. The processes, tasks and technology belong to the technical system whereas the attributes of people (e.g. skills, attitudes and values), reward systems, the relationship among employees and structure belongs to the social system. In order to achieve optimized output, these two systems need to interact (Bostrom & Heinen, 1977). An information system can create new responsibilities, roles and changes in structures which can collide with the existing organizational culture (Markus, 1983). Managers should also learn about the constraints and possibilities with the system and must as much as possible anticipate, predict and manage changes in structure, work tasks and inter-organizational relationships (Robey, 1987).
Orlikowski (1992) criticize this research for relying too heavily on the human agents. How technology is appropriate and deployed also depends on social and economic factors that go beyond managerial intent. She also criticizes the assumption that technology is an objective external force that has a relatively deterministic impact on human behaviour and organizational properties such as social structures. In line with Orlikowski (1992), several researchers do not view technology as being directly responsible for social change. Instead, these researchers (Barley, 1986; DeSanctis & Poole, 1994; Orlikowski, 1992; Orlikowski & Robey, 1991; Walsham & Han, 1993) have proposed alternative ways to understand the relationship between technology and organizations, specifically the social system in which the technology is deployed (Harrison et al., 2007). Some of these researchers have been influenced by Giddens’ Structuration theory (Barley, 1986; DeSanctis & Poole, 1994; Orlikowski, 1992; Orlikowski & Robey, 1991; Walsham & Han, 1993). Even though technology is not explicitly discussed by Giddens (1984), his focus on the duality between individual and structure has shown to be useful in the research on organizations and technology (Orlikowski, 2000). This is further elaborated below.

**TECHNOLOGY AND ORGANIZATIONAL SOCIAL STRUCTURES**

From the concepts of Giddens (1984), Orlikowski (1992) has developed a theory for investigating how technology interacts with organizations - the structuration model of technology. The theory is used to analyse the development and use of Computer-Aided Software Engineering (CASE) tools. Two other researchers with similar theoretical ideas are DeSanctis and Poole (1994), who have developed the Adaptive Structuration Theory (AST) to reveal the complexity of the relationship between organization and technology. Orlikowski (1992) and DeSanctis and Poole (1994) uses related theoretical ideas and the main difference is that while Orlikowski (1992) give a “broad-brush” approach DeSanctis and Poole (1994) give a more detailed view investigating the interaction of groups and organizations with information technology (Rose & Scheepers, 2001), specifically in the setting of comparing small groups using group decision support system (GDSS) (DeSanctis & Poole, 1994).

Together, these researchers argue that there is a dynamic interaction between information technology and social structures. In other words, technology has the potential to change or reconstitute social and organizational structures, and at the same time these structures also affect the implementation, its design, and how employees think about and use the technology. (DeSanctis & Poole, 1994; Orlikowski, 1992) An information system provides social
structures which can be described in two ways: “the structural features of the given technology and the spirit of this feature set” (DeSanctis & Poole, 1994, p. 126). Structural features are the design the system offers such as the specific types of rules and resources or capabilities (DeSanctis & Poole, 1994). The design reflects certain facilities such as resources to accomplish the work and certain norms such as rules defining the organizationally sanctioned way of executing work (Orlikowski, 1992). The structural features can also be seen as the possibilities and limitations of how to use the system. The more restrictive a system is the more limited is the possible actions that the user can choose between (DeSanctis & Poole, 1994).

The spirit of the system is the official way in how the technology wants people to act when using the system and how to interpret its features. The spirit of the system can be the features it incorporates and how the features are named and presented. It could also be the nature of the user interface, online guidance facilities or training materials provided with the system. Some technologies may give a consistent and clear spirit while other technologies may not. An incoherent spirit can make the use of the system more difficult since it might send contradicting signals. If the spirit instead is coherent, the individuals can easily use the technology. Together, the structural features and the spirit of the information technology, form its structural potential. (DeSanctis & Poole, 1994)

There are also other sources of structures that are not inherent in the technology which affect how people think about and use the technology. The organizational environment provides social structures such as histories of task accomplishment, modes of conduct and cultural beliefs. (DeSanctis & Poole, 1994) Individuals are influenced by institutional properties such as social structures in their interaction with technology. To perform their work, they draw from social structures such as norms, resources (time and skills) and knowledge (Orlikowski, 1992). Over time, social structures may emerge in interaction with the technology. That is created either by a reproduction of technology structures or by mixing the technology with other social structures. When emergent structures are used and accepted the change becomes fixed in the organization. (DeSanctis & Poole, 1994) Individuals also draw on their knowledge, skills, assumptions and expectations about the system and its use. This is usually influenced by communication, previous experience and training. (Orlikowski & Gash, 1994)
SUMMARY OF THE LITERATURE

The theories elaborated above is summarized below in purpose to create a more narrow understanding of how these theories are used in this paper when analysing what relationship that exists or do not exist between ERP system and organizational social structures in a military organization, and how this has affected the implementation and use. Researchers have over the years identified several reasons for failure as well as critical success factors when implementing an ERP system (Bhatti, 2005; Holland & Light, 1999; Zhang et al., 2002). Some of these factors are top management commitment (Bhatti, 2005; Bingi et al., 1999; Holland & Light, 1999; Zhang et al., 2002), trust among management and employees (Zhang et al., 2002), effective communication such as clearly defining new roles and responsibilities (Lorenzi & Riley, 2003) but also training and education of employees (Bhatti, 2005; Bingi et al., 1999; Zhang et al., 2002). In order to understand what role an ERP system can have in an organization one need to understand the social structures of the organization. The main ideas and understandings concerning organizational social structures are discussed around terms such as: the division of labour, roles, language and norms (Fleetwood, 2008). Over the years several researchers have tried to understand what role technology has in organization but many early researchers have seen the technology as having direct impact on organizations (Orlikowski, 1992). Some researchers have further developed these ideas in order to understand the relationship between organization and technology (Barley, 1986; DeSanctis and Poole, 1994; Orlikowski, 1992; Orlikowski & Robey, 1991; Walsham & Han, 1993). There is a dynamic interaction between information technology and social structures. In other words, technology has the potential to change or reconstitute organizational social structures and at the same time, these structures also affect the implementation, its design and how employees think about and use the technology. (DeSanctis & Poole, 1994; Orlikowski, 1992) Technology provides social structures in two ways: the structural features and the technology spirit. Together, the structural features and the spirit of the information technology, form its structural potential. At the same time, employees draw on social structures such as history of task accomplishment and mode of conduct which affect how they use and think about the technology. (DeSanctis & Poole, 1994)
IV. A QUALITATIVE RESEARCH METHODOLOGY

METHOD AND DESIGN

As this study aims to get an in-depth understanding of what relationship that exists or do not exist between ERP system and organizational social structures in a military organization, and how this has affected the implementation and use, a qualitative research method is considered to be preferred (Yin, 2003). This research is designed as an exploratory study conducted by individual interviews with open-ended questions. Since this study wants to give a richer understanding of a problem, an exploratory study is particularly useful. Exploratory studies often start with a broad focus which during the time research progress, and new insights occur, will become narrower. Therefore, exploratory studies are often flexible and adaptable to change. (Saunders et al., 2012) As the chosen design is flexible the authors has to be flexible too and adjust to new data and insights. During the start phase, the focus of this study changed a bit as more information about the different changes in the organization occurred.

STRATEGY – A CASE STUDY

The strategy used within this qualitative research method is a case study of the Swedish Armed Forces. A case study explores a phenomenon within its context and provides an opportunity to analyse a phenomenon that few have considered before (Saunders et al., 2012). Since this study wants to gain a deep understanding of the context of the research, a case study strategy is appropriate (Eisenhardt & Graebner, 2007). ERP systems are rarely studied in public sector organizations and are therefore one aspect of why the Swedish Armed Forces are an interesting case to observe. In this situation, a single case study strategy is most appropriate as it correspond to the research questions of the study which provide the ability to generate answers to the question ‘What?’, ‘Why?’ and ‘How?’ (Rowley, 2002). The Swedish Armed Forces are treated as one unit, not by comparing different subunits, and due to this view, a holistic approach is used (Saunders et al., 2012). The authors are aware of the consequences of using a holistic approach. Since only a few respondents from different bases in the Swedish Armed Forces were interviewed the paper may provide a broad and simplified picture. Still, the authors have chosen this approach since a broad picture hopefully can provide a view where people at the same position as the respondents can recognize themselves, regardless of where they are located in Sweden. The authors argue that this approach is more suitable for the aim of this study. This because not using a holistic approach may provide a view where one part of the organization equals the whole.
The case study organization, the Swedish Armed Forces, was identified by talking to employees working in the organization as well as the attention from media about its current organizational changes and the problems with PRIO. Also, the Swedish Armed Forces is a public sector organization which made the organization suitable for the study. Consequently, the research question is not based on a request from the Swedish Armed Forces and the authors identified the topic without involvement of the organization. The authors are external researchers which involve both positive and negative aspects that have been taken into consideration. A challenge is that the knowledge about the organization is not the same as if being an internal researcher working in the organization. On the contrary, an advantage is that an external researcher does not carry around preconceptions and assumptions about what is going on inside the organization. (Saunders et al., 2012)

**SAMPLING OF RESPONDENTS**

When sampling respondents, snowball sampling was used (Small, 2009). After identifying the research problem, the first contact with the Swedish Armed Forces was with two employees who suggested that contacting the information department by e-mail or telephone would be the best way to proceed. Since ethical concerns are important to take into consideration, especially when it involves human participants, the suggested procedure was followed (Saunders et al., 2012). Therefore, e-mails were sent to an information department at one base in the organization as well as to the Headquarter of the organization. As external researchers, awareness was made regarding the importance of formulating the idea as clear as possible and in a proper way to gain trust (Saunders et al., 2012).

The information department at one of the bases in the organization answered that, interviewing employees are always allowed. A few days later, a response came from an employee working with project PRIO who offered help by sending contact information to suitable employees. The authors proceeded the contact with those employees from the start phase, whom also helped by sending contact information regarding employees to interview. Additionally e-mails to information departments at different bases were sent to find respondents spread all over the organization. The authors requested to interview managers with staff liability at the two lowest levels in the organization, specifically platoon commanders and company commander whom today do administrative tasks with PRIO. When using snowball sampling positive effects are that the respondents might experience a higher level of trust to the interviewer, the negative aspect might be bias due to the
relationship between respondents (Small, 2009). For this study, the authors are aware of that respondents might have been asked or were willing to participate because of different reasons, which bring limitations to the study. One reason might be that the communication department and head quarter might have asked employees with opinions that can reinforce the picture that they want to provide.

What is the most appropriate number of individuals to interview is a difficult question. According to Small (2009) the more complex the process, the more respondents are needed to solve the problem, and to find important information in the data collected. When the authors start to see patterns in the answers, the numbers of respondents probably have reached saturation and new important information is not likely to occur (Small, 2009). The authors started to see patterns in answers when approximately 10 individuals had been interviewed. To provide substantial support to the patterns the authors carried through a total of 17 interviews, a sufficient number of respondents.

**DATA COLLECTION**

Among the 17 individuals interviewed, there are 3 company commanders and 14 platoon commanders. They have been working in the organization since year 2009 and earlier, and are spread over 6 bases at different locations in Sweden. 3 company commanders were interviewed to provide a broader understanding of the situation, compared to data consisting of only platoon commanders. This, since they also use PRIO in their work and have platoon commanders as their subordinates. Conducting semi-structured interviews were most suitable since it gave the opportunity to ask further questions outside the interview guide (Appendix A). The interview guide is composed by questions influenced by the theoretical perspective of the study. Most of the questions have open response opportunities which gave the respondents the possibility to tell their story and opinion. Other questions are more specific but still function as a guide dependent on the respondents’ answers. (Saunders et al., 2012) This also created the opportunity to ask further questions in response to what were seen as significant replies (Bryman & Bell, 2007) as well as the possibility to discover what was happening in the organization (Saunders et al., 2012). All interviews were conducted in Swedish as this is the working language the respondents use as well as the most suitable language to avoid misunderstandings between the respondents and the authors. The interviews were later translated to English.
When using semi-structured interviews there are three different types of bias one have to be aware of; interviewer bias, response bias and participation bias. Related to participation bias there are the fact that the respondent was willing to participate and why others rejected the invitation. Related to interviewer bias are the way the interviewers act such as comments, non-verbal behaviour, tone and the way responses are interpreted. Lack in credibility and failure in creating trust can also create bias and doubts about validity and reliability, which one have to be aware of. Related to response bias are perceptions about the respondent as well as the fact that the respondent can feel uncomfortable to answer all types of questions and therefore skip certain aspects when giving the answers, providing the researchers with a partial picture. (Saunders et al., 2012)

5 interviews were conducted face-to-face and 12 over the telephone due to geographical hindrance. There were one respondent and one or two interviewers at each interview occasion. The decision to interview one respondent at the time gave each respondent the opportunity to tell his or her opinion without being affected by other respondents. The respondents may come in to areas that the researcher have not thought about, they might use words and talk about ideas that need further discussions to create deeper understanding, and they might even come up with new thoughts when having the opportunity to “thinking aloud”. This, the authors were aware of, and due to the semi-structured interview type used the authors could adopt to these sidings when they occurred. (Saunders et al., 2012)

Awareness have been made that there are both benefits and drawbacks with telephone interviews and face-to-face interviews. During the interviews the authors took into consideration that it can be questions that the respondents do not want to answer. In this situation it is an advantage to have face-to-face interviews because it is easier to observe signs of uncomfotring from the respondents compared to doing interviews over the telephone. If observing these signs the interviewer still have an opportunity to think of why and try to reformulate the question. (Bryman & Bell, 2007) There are many advantages with doing face-to-face interviews, such as the possibility to establish a personal contact which is more difficult to achieve with telephone interviews (Saunders et al., 2012). However, an advantage with telephone interviews is that it made it possible for the authors to interview respondents spread at bases situated at different locations in Sweden. (Bryman & Bell, 2007)

In order to try to avoid the problem that certain questions might be uncomfortable to answer, the respondents have been given anonymity. An advantage with treating the participants
anonymously is that it can give an enhanced openness from the respondents. The majority of
the respondents wanted to be anonymous and since their names are irrelevant for the purpose
of the study all respondents are treated anonymous and equal. Therefore, the respondents are
referred to the position that they have. Additionally, the interviews were recorded, with
approval from the respondents. Recording the interviews was done in order to avoid distorting
the respondents’ answers which can result in introducing errors (Bryman & Bell, 2007). Below, Table 1. provides a compilation of the conducted interviews, what positions the
respondents have and how they are referred to in the study.

<table>
<thead>
<tr>
<th>Titel</th>
<th>Abbreviation</th>
<th>Type of interview</th>
<th>Recorded</th>
<th>Length</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Commander</td>
<td>CC1</td>
<td>Telephone</td>
<td>X</td>
<td>50 min</td>
<td>2013-03-20</td>
</tr>
<tr>
<td>Company Commander</td>
<td>CC2</td>
<td>Telephone</td>
<td>X</td>
<td>45 min</td>
<td>2013-03-27</td>
</tr>
<tr>
<td>Platoon Commander</td>
<td>PC1</td>
<td>Face-to-face</td>
<td>X</td>
<td>30 min</td>
<td>2013-04-02</td>
</tr>
<tr>
<td>Platoon Commander</td>
<td>PC2</td>
<td>Face-to-face</td>
<td>X</td>
<td>25 min</td>
<td>2013-04-02</td>
</tr>
<tr>
<td>Platoon Commander</td>
<td>PC3</td>
<td>Face-to-face</td>
<td>X</td>
<td>30 min</td>
<td>2013-04-03</td>
</tr>
<tr>
<td>Platoon Commander</td>
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<td>Face-to-face</td>
<td>X</td>
<td>30 min</td>
<td>2013-04-03</td>
</tr>
<tr>
<td>Platoon Commander</td>
<td>PC5</td>
<td>Telephone</td>
<td>X</td>
<td>35 min</td>
<td>2013-04-03</td>
</tr>
<tr>
<td>Platoon Commander</td>
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<td>Telephone</td>
<td>X</td>
<td>55 min</td>
<td>2013-04-15</td>
</tr>
<tr>
<td>Platoon Commander</td>
<td>PC7</td>
<td>Face-to-face</td>
<td>X</td>
<td>25 min</td>
<td>2013-04-18</td>
</tr>
<tr>
<td>Platoon Commander</td>
<td>PC8</td>
<td>Telephone</td>
<td>X</td>
<td>30 min</td>
<td>2013-04-18</td>
</tr>
<tr>
<td>Company Commander</td>
<td>CC3</td>
<td>Telephone</td>
<td>X</td>
<td>35 min</td>
<td>2013-04-18</td>
</tr>
<tr>
<td>Platoon Commander</td>
<td>PC9</td>
<td>Telephone</td>
<td>X</td>
<td>30 min</td>
<td>2013-04-22</td>
</tr>
<tr>
<td>Platoon Commander</td>
<td>PC10</td>
<td>Telephone</td>
<td>X</td>
<td>55 min</td>
<td>2013-04-22</td>
</tr>
<tr>
<td>Platoon Commander</td>
<td>PC11</td>
<td>Telephone</td>
<td>X</td>
<td>35 min</td>
<td>2013-04-22</td>
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<tr>
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<td>PC12</td>
<td>Telephone</td>
<td>X</td>
<td>35 min</td>
<td>2013-04-25</td>
</tr>
<tr>
<td>Platoon Commander</td>
<td>PC13</td>
<td>Telephone</td>
<td>X</td>
<td>30 min</td>
<td>2013-04-25</td>
</tr>
<tr>
<td>Platoon Commander</td>
<td>PC14</td>
<td>Telephone</td>
<td>X</td>
<td>35 min</td>
<td>2013-04-26</td>
</tr>
</tbody>
</table>

Table 1. Compilation over conducted interviews.

**DATA QUALITY**

When conducting qualitative studies with semi-structured interviews one must be aware of the
lack of standardization in these types of interviews. Qualitative studies conducted with semi-
structured interviews will not be generalizable and other researchers would not be able to find
the same result if doing a similar study (Saunders et al., 2012; Small, 2009). If searching for
standardization and generalization one should instead need to do a survey (Small, 2009).
Findings derived from data collected through semi-structured interviews do not have the aim
to be repeatable as the aim with surveys. Instead the aim with findings from semi-structured
interviews is to reflect reality at the time for the study. (Marshall & Rossman, 2006) This is
also connected to the fact that this study is conducted over a short time horizon which can be described as a cross-sectional study. A study is cross-sectional when researchers explore a particular phenomenon at a particular time due to time constraints. (Saunders et al., 2012)

Flyvbjerg (2004) argues that it exist several misunderstandings or oversimplifications regarding case-study research for example that the approach makes it difficult to summarize and develop general propositions and theories. This is corrected by Flyvbjerg who describe: “It is correct that summarizing case studies is often difficult, especially as concerns case process. It is less correct as regards case outcomes. The problems in summarizing case studies, however, are due more often to the properties of the reality studied than to the case study as a research method. Often it is not desirable to summarize and generalize case studies. Good studies should be read as narratives in their entirety.” (Flyvbjerg, 2004, p. 431-432). The result from a well-executed single case study will therefore not explain society but instead justify that a particular phenomenon or relationship exists (Small, 2009), which is the intent with this study. From this point of view, this study uses semi-structured interviews which are an important complement to existing research conducted by surveys (Saunders et al., 2012).

Recognition over the fact that interpretation and perception of the data collected can be viewed differently (Bryman & Bell, 2007) is considered. To maximize the reliability the authors have been rigorous in the way research have been carried out and according to Saunders et al. (2012) this will help to achieve as high reliability as possible. To be able to help other researchers to better achieve understanding regarding the process and to be able reanalyse the data collected the process have been explained narrowly by the authors. As Saunders et al. (2012) suggest this have been realized by the authors taking notes regarding all work phases during the process. A positive effect when using semi-structured interviews are that, due to its clarifying questions, studies achieve a high level of validity if they are conducted accurately (Saunders et al., 2012).

DATA ANALYSIS

There is no standard approach when it comes to analyse qualitative data. The most appropriate approach depends on the chosen research philosophy, research strategy, and data collection method, as well as if an inductive or deductive approach is chosen. In the research settings for this qualitative study a generic approach to the analysis is most suitable. A generic
approach is not linked to a specific theoretical approach but adequate when working to find key themes and patterns in, as well as draw conclusions from, transcripts of qualitative data. (Saunders et al., 2012) In order to work with the transcribed interviews, the authors divided the material into different categories. To find suitable categories the theories from the literature review was used as a guide as well as patterns visible in the answers from the interviews. However, an important issue to be aware of is that the respondents in this study give a similar overall picture but are sometimes conflicting regarding details. They are also providing conflicting thoughts themselves. Since the respondents do not give a black or white picture, neither can the authors. At the same time, this study wants to explain this case in its diversity, allowing it to provide complex and sometimes conflicting stories the respondents describe (Flyvbjerg, 2004). In this paper the presentation of the result are made visible by incorporation quotations in the analytical findings. In doing so the authors have taken the advices from Kvale and Brinkmann (2009) into account and kept in mind that; quotations needs support in the text of the authors, the quotations should be related to the findings, stringing together several quotations should be avoided, and the anonymity of the person quoted should be ensured. Below, the empirical findings are presented.

V. EMPIRICAL FINDINGS

INFORMATION MEETINGS

The employees of the Swedish Armed Forces were introduced to PRIO before the implementation started. Most of the respondents explain how PRIO was communicated to them at information meetings (PC1-PC3, PC5, PC6, PC8, PC10, CC1, CC3). Some of them refer to the meetings as a revival meeting where all employees at the unit went away to a lecture hall (PC1-PC3, PC5, PC6, PC10, CC1). One of the respondents explains: “We went to some hysterical mass meetings where people talked about this fantastic system. Actually I was a little bit sceptic in the beginning; I probably was but that were probably others as well” (PC3). Another respondent describe: “...actually, they were trying to convince us about the systems excellence and it was almost comical” (PC5). This is further described by PC6: “I do not believe that there are many people buying these kinds of arguments, especially not anyone of our kind of personnel category”. Another respondent described it a little bit different: “It was someone, a wise cracker who stood and gesticulated in the front and talked about PRIO, talked about previous implementations and what enormous problems that had occurred. People were asking questions and painted up disastrous scenarios” (CC1).
At the same time as potential upcoming problems were communicated the top management tried to mediate a positive viewpoint. PC3 explain: “From top management it was almost like a religion, this system. They tried to make people positive because they understood how complicated it was. Besides it had been many delays with the system. I think they felt people were sceptical and negative, so at this revival meeting they talked about how fantastic the system was, which I think made people even more sceptical. But to say, managers above me and a little bit higher up were just as puzzled as I. It was the top management who were positive. It comes from Rome as we say”. To use positive people as informants seemed not to matter as PC3 describe: “They must have found the most positive people in the whole organization and put them there like mannequins. It was perhaps a little ungrateful task to stand there on stage and answer questions from hundreds of individuals who all were very sceptical”. PC9 perceived that the informants just acted as they were positive: “At the information meeting they said it was fantastic. But later, when talking to them during a coffee break or in other situations they were just as dissatisfied as one self” (PC9).

**THE REASONS FOR IMPLEMENTING PRIO**

The reasons for the implementation seemed to have reached the respondents. CC2 experienced that company commanders and platoon commanders understood the reason for implementing PRIO, but among soldiers the respondent was not sure if the reason were obvious. The reason for the implementation according to the platoon commanders was expressed to increase cost control and save money (PC1-PC4), to control the amount of work hours and purchases (PC2, PC4), save time, be more effective, and to gather all information in one system making it more practical (PC3, PC5, PC7, PC8, PC10, PC14). The reason was also expressed as the need to update older systems (PC7, PC8). On the other hand PC6 believe that peoples negative thought about PRIO stem from not knowing the reason to the implementation.

**ATTITUDES ABOUT PRIO BEFORE THE IMPLEMENTATION**

Despite positive informants praising the system and an understanding of the reason of the implementation, the general reactions have been mainly negative among employees in the Swedish Armed Forces (PC1-PC14, CC1-CC3). One of the respondents explain the fear among employees when they were informed about PRIO: “Generally, people were afraid that it would destroy old routines, things that have been working so well, and questioned why that
should be changed. It was also an intrinsic fear among many officers that they would be caught behind the desktop even more than they previously were” (PC5). Similarly CC3 explain: “Platoon commanders were negative to the administration, that they should be more tied to office spaces instead of being out in the forest and at firing ranges”. The respondent also described that it perhaps is connected to the fact that they want to perform and be as good as possible. Because what is judged in the end is not how good you have been to administrate the platoon but how you perform in the field and solve tasks your platoon should solve (CC3). Another respondent describe: “I expected that the role of the platoon commander would change compared to how it was in 2008 when I was a platoon commander” (PC4), and continue by expressing the current situation: “That apprehension or expectation came true. You simply have to do the best of the situation” (PC4).

CC3 was informed about PRIO in an informal manner, from a civilian working with the implementation. That person expressed that it would be totally different demands on managers in the Swedish Armed Forces in the future. The respondent was instantly defensive. What type of managers the organization should have, is based on an analysis of PRIO and the HR-transformation, and is not based on an analysis of what type of managers the organization and its operations need. (CC3) Some other respondents (PC2, PC3) thought it was just another system coming up that they had to learn and work with for a while. A system that probably after a time, just as many other systems earlier, would pass over. Peoples’ negative opinions were present at start together with a resistance against the system; it was seen as a limitation and something increasing frictions in the organization (PC2, PC7, PC10). People talked with each other and there were rumours about everything. Therefore, before PRIO was implemented: “It was very difficult to create a personal opinion, as one frequently took part of others opinions” (PC8). Two of the respondents though expressed they had high expectations and positive thoughts about PRIO before the implementation (PC12, PC14).

Above, thoughts about the system before the implementation are described. At the time for this study some years have passed. Therefore, thoughts expressed above are based on memories of opinions at that time. Below provides a description of what tasks the respondents preform with PRIO, how much they use the system and how it works. Also, how the respondents have learnt to work with the system and what they think about it is presented.
THE USAGE OF PRIO

TASKS PERFORMED WITH PRIO

Common tasks performed by platoon commanders with PRIO a primarily concern subordinates. Among the respondents, platoon commanders have between 12 to 37 subordinates. With PRIO, platoon commanders plan their subordinates working hours and approve their working hours after the subordinates have registered it. Further they plan exercises, training, courses and education for the platoon as well as for single individuals. They also schedule and accept subordinates’ vacations, allowance, absence due to illness and leave of absence. (PC1-PC9, PC11-PC14) Other tasks performed with PRIO consist of making purchases of equipment (which earlier was collected from stores at the regiment), placing travel orders as for examples reservations of cars, and to print out staff list and list of kindred connected to subordinates (PC1-PC5, PC7-PC10, PC13, PC14). Finally, personal time accounting and enquiries of vacation are also done with PRIO (PC1-PC14).

Similarly, the company commanders (CC1-CC3) use PRIO for planning working hours, control work hours and to approve their subordinates (the platoon commanders) working hours, to do traveling reservations and approve subordinates traveling reservations. Also they use PRIO for budget, economy monitoring, and purchases. However, two of the company commanders explain that they are delegating the purchases (CC1, CC2). CC1 explain: “Actually, I am not using PRIO that much. Let’s say, it is like this; I am shrewd so I am delegating all purchases I need to do to someone else. And then, someone else can sit and be wilful with that and I can gladly do something else. But that is why you have people under you... I am letting others do the dirty work such as purchases, planning of working hours and those things that are time consuming.” The other company commander explain “I am not doing purchases with PRIO, I am taking myself the freedom to delegate the purchase to others, because... to be honest, I have not had time to completely learn it. I learned once, but then I forgot about it” (CC2).

TIME SPENT ON TASKS WITH PRIO

How much time platoon commanders spend on tasks with PRIO differs between the respondents. It also differ from month to month how much time each respondent spend with the system. Platoon commanders describe that it is difficult to say how much time they spend with PRIO since it also depends on how the working period looks like and they spend more time with PRIO during certain periods. The majority of the platoon commanders in the study
spend around 2 to 10 hours a week, but sometimes up to 20 hours a week when it is the period for scheduling subordinates’ working hours. PC13 explain that it would be easy if everyone worked from 8 am to 5 pm because it is how the system is built. But often, individuals perform different tasks over a period of time and if the working hours are different between each subordinate, it requires much more time than if all subordinates have the same work tasks and the same working hours (PC1-PC14). PC13 describe that it also takes more time depending on how many subordinates a platoon commander have. At the respondents unit, they also have activities day and night. They work 35 hours a week while the system is built with the notion that everyone have 40 hour-working week, which results in much more time of administration with PRIO.

Further, all respondents describe how they manually must enter each subordinate’s working hours, day by day, with different codes. There are for instance different codes depending on when your working day starts or if the platoon is away on operations or staying at the regiment (PC1-PC14). A platoon commander explains: “It is quite time consuming to enter a code, for each day, for 35 individuals” (PC2). How much time the company commanders spend with PRIO differs between the respondents. The two company commanders who delegate parts of the tasks with PRIO use PRIO approximately 1-2 hours a week (CC1, CC2) while CC3 spend 8 hours a week with PRIO.

“THE HATS”

Managers with staff liability have an authorization in PRIO where one is able to administrate the subordinates. This type of authorization is, as mentioned earlier, called “hat”. A soldier, subordinated to a certain platoon commander, is registered under that platoon commander’s “hat”. Everything that have to be accepted such as courses, vacations and salaries connected to that soldier can only be accepted by the platoon commander owning that certain “hat”. (PC12) As PC1 explain: “I am the only one who can approve my subordinates. I have to be here physically to push the acceptance-button, in order for my subordinates to receive their salary. If I am away, no one else pushes that button”. To not be able to accept salary might not be an urgent problem. However, if a soldier is commanded to the field, that soldiers platoon commander have to accept it with PRIO. It cannot be delegated and accepted by for example another platoon commander or the company commander, due to the restrictiveness of the “hat”. Only the one owning the “hat” connected to the actual soldier is able to accept such things concerning that subordinate, making the situation more complicated (PC1). To not
be able to accept salary though becomes a problem in the long run. As CC2 explain “During one period we had a military officer that did not have a commander. The commander had not been recruited yet. Since no one owned that “hat”, no one could accept that officer’s salary. Nor, no one could bear that “hat””. Because of that CC2 describe: “The reality in what we do, does not match with the system PRIO”. One of the respondents, PC10, has the same tasks and responsibilities as a platoon commander, but is not it officially. PC10 explain: “I do the same type of work tasks, but I do not have the “hat””. Due to not having a “hat” in PRIO, PC10 have to ask the company commander to help with the administration. This has resulted in loss of control over mandatory tasks and weekend the relation to the soldiers. PC10 describes: “I cannot control what is happening in PRIO, it is my boss. When it is not working for the soldiers with PRIO they turn to me (...) it is me who take the bullets” (PC10).

SCEPTICISM AROUND PRIO

Negative talk about PRIO has been circulating since the start and in some groups also jargons and jokes. Some describe PRIO as common coffee brake chatter (CC2, PC2, PC12), making jokes and talking about problems when taking a coffee. In one case though, PRIO is not seen as a coffee brake chatter (PC1). PC6 remembered how they fooled around making jokes about PRIO when it was installed: “The first time the PRIO-icon was showed on the computer screen, that day, it was a lot of jokes: Have you got your icon? And when you got it, one celebrated with a cup of coffee”. CC2 give an example of how they make jokes by referring to well-known movies: “Jokes are made about PRIO and the Terminator movie ‘Sky net’ where the world gets occupied by computers. PRIO is the first part of ‘Sky net’. It is not intelligent humour, but it is fun”. Another respondent sometimes make jokes about the economic situation and PRIO. As the computer software is updated, the screen acquires a new layout. When it happens everyone has just learnt how to navigate in the old layout, and in the new layout, no one have a clue how to do purchases. Therefore, it takes a while until purchases are done again. Since no one is buying stuff, money is saved. (PC3) PRIO can also be the perfect ice breaker, as PC6 suggest: “If you want a really good ice-breaker start talk about PRIO, then you have the common denominator: PRIO you know. Then you get every help you need, because you have the perfect common enemy. It works every time”.

Some respondents experience the talk about PRIO to mainly contain negative opinions, as PC8 explain: “One talk mostly about how crappy and worthless PRIO is in general. It is hard
“to give an example”. Several of the respondents’ experience that the system is something one can always blame and express in the same way how employees talk about it: “It is PRIO’s fault” (PC5, PC12, PC13, CC3). PC5 further describe: “Problems often arise with PRIO. Everyone knows it. It is kind of the attitude”. Also, people are whining and blaming the system in more general terms (PC1, PC3, PC6, PC8, PC14, CC1) as PC1 explain: “Many are whining about the system and think they do not have time for any other things than pushing buttons in it. I do not really recognize myself in this kind of situation”. Several of the respondents express similar feelings of not recognizing themselves as whining, instead they believe they are trying to have a positive attitude and try to make the best out of the situation (PC2, PC3, PC4, PC5, PC6, CC1, CC2). Lately though, negative talk and jokes about the system have declined and PRIO is not that much focus for peoples conversations as it was in the beginning (PC2, PC5, PC7, PC14).

**OPINIONS ABOUT THE USE OF PRIO**

A common opinion among the respondents regarding the system is that certain things could have been better, such as the user interface which looks old-fashioned and is illogical (PC3, PC5-PC13, CC1, CC3). Some platoon and company commanders explain how PRIO uses another technical language than they use in the military, particularly among officers, and that it is created to fit large companies (PC13, PC14, CC2). CC2 further describe: “It is not made for us, it is made for large companies, which results in that the information we want may exist in the system but we do not know how to find it. We are not used to how things are named in the system. I think that is one of the biggest cons but at the same time, I think the system can have potential but with our competence and how we talk, it does not match with the system”.

Instead of using names, the Swedish Armed Forces uses position numbers when referring to a person. In PRIO, there was in the beginning, impossible to see an individual’s position number which created extra work and was time consuming (PC14). Additional, the employees normally talk and plan in weeks, but PRIO have only showed days and not weeks. However, both these examples have been changed as this study is done. (PC13, PC14) In PRIO there are a lot of buttons, subtitles and codes, which are illogical. (PC8, PC9, PC10, PC12, PC13, PC14) Signs saying “ok” and “stop” do not exist, instead there are signs saying “Release” or “Allocate to me”. PC14 express: “What does that mean? It is impossible to figure out. No one understands”.

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One respondent have created manuals and notes to use when there is something the respondent have not done in a while (PC3), and another have collected manuals made by others (PC14). PC5 further explain: “I know that some are very skilled at planning work hours with PRIO and have found some sort of system for doing it in a good way but I am not one of them so to speak. It might perhaps depend on that I am not very educated with computers” (PC5). However, a common belief is that the system becomes better with every new update. “It has not become worse since the implementation, rather the opposite. I believe it becomes better continuously” (PC8). Also, the platoon commanders think they become better: “With time I have learnt how to use the system and today; of course, I do not think it is as complicated as in the beginning” (PC5).

One respondent argues that it actually does not matter if the user interface looks old because of the limited tasks the respondents do with PRIO, and that one learn it quite fast anyway (CC1). Similarly PC2 think most things are user-friendly and that it is mostly about learning how to use it. PC1 explain it as follows: “Certain things could have been easier, but it is still understandable, even for those not so brilliant when it comes to computers. I have a low level of IT-knowledge and do not like to work with computers, still I can handle it. It is not that complicated” (PC1). Another platoon commander take it further: “Actually, I have no problem with the system in itself. It is great that everything is integrated. The problem is that the administration has been pushed down to a low level to low. I should not be sitting with this. I should be out in the field and lead my unit, the operations” (PC8).

The respondents’ express different opinions of what they think are the benefits with PRIO. Most of the respondents perceive some benefits with the system. Three platoon commanders describe that it is smooth and easy to report their own working hours (PC2, PC5, PC7). Two respondents think it is quite smooth to order equipment, and that it is easier to purchase several different things than before since it today is a catalogue on the computer where one can sit and look and find things that one might need (PC2, PC3). PC8 think the part that involves traveling in PRO is much easier than before when they used a paper form. PC6 argue that a lot of the personnel administration the respondents do with PRIO would have taken longer time if doing it in some sort of Excel-sheet. PC13 think it is easy to approve work time. Some experience that the system can provide a good overview over their subordinates, and if you do it right, you can quickly get a current list of kindred and other reports from PRIO which is effective (PC1, PC10, PC13, CC2). “The benefits are that there is a system which is created to make it possible to administrate basically everything, all you need to deal with
personnel. Additionally, there are different functions such as purchase and courses but also traveling administration. Those are the main benefits” (PC11). CC3 also think certain things have become better with PRIO but that other negative effects take overhand. The company commander explains: “It feels like the claw in this is: Are we getting better? Right now, it feels like the answer is no and I think that is alarming. It feels like it is being filtered away in all other noise. Certain things are actually better but it is somehow difficult to be happy for those small grains when the pudding taste bad” (CC3).

THE ROLE OF PLATOON COMMANDERS

According to PC6, there are two different schools of opinions regarding what a platoon commander should do. Some have accepted that a platoon commander is a “desktop person” nowadays. Others hold on to the role platoon commanders had between the 1980’s and the beginning of the 21st century. Back then it was very concrete what their tasks should be and they could follow up the operations in a totally different way than today. CC3 think the company commanders’ and also platoon commanders’ role today is conflicting with what they should do. The company commander explain: “There is a unit that should be able to act, but today, all managers do other things than leading the units. Or we are leading its work but we are not leading the units, if you understand what I mean. We are sitting and administrating the units instead of leading them. We get skilled in administering salaries and do travel reservations but not to organize fire and movement, relocation in terrain and confront enemies which I think is what we actually should do at the position we have” (CC3).

CC2 think a platoon commander should educate and lead ones platoon, participate in company exercises in order to develop oneself within the frame of the organization. A platoon commander should find initiative and dare to fill the leader role fully and make sure that the battalion goes forward. The respondent explain that platoon commander do not have time for this today. The respondent think the work tasks that platoon commanders and company commanders have today go against the officer role and think an officer should be and act as a leader. On the other hand, the respondent further explain that today officers take responsibility for making sure that their subordinates get the correct salary, that they take the right courses. In that way, you take responsibility in another way. “I do not know if it is me who have an old view but, I think it goes against what an officer should do in some cases” (CC2).
Company commanders do many other administrative tasks that are not related to PRIO and get caught behind the computer. CC1 describe: “People think I am running in the forest all day long but I do that very seldom. Of course, that is what I should do if I in some way could minimize the administrative burden. On the other hand, I think I am quite good at that since I delegate a lot of those tasks. But I would still like to spend more time out at the operations, where it is conducted. Of course not all the time, but more than I do today”. CC3 describe that many support functions have disappeared, which have resulted in that company commanders have to do more and more tasks that previously were performed by personnel at these support functions. “It is not many times per week where I can do what I am in fact supposed to do” (CC3). CC3 also explain that there are certain things that you have to do which is connected to the managerial position such as planning subordinates working hours and plan operation, which the respondent think is obvious things. The problem is that they do not have time to actively participate, monitor operations on a daily basis and follow up so things proceed as planned. Further, the respondent explain: “It becomes a lack of confidence. This since the leadership doctrine in the armed forces largely is built on leadership and that becomes difficult to maintain since the managers today are those who practice least. Therefore, in the end they are the ones who are the worst when it really counts and when you are in the forest. Actually, it becomes a leadership situation that is not desirable and goes against what our leadership doctrines say” (CC3).

Similarly, several platoon commanders consider they should have more time together with their soldiers (PC2, PC8, PC9). Some argue that the subordinates will lose respect and trust for their manager if the manager always sits in front of the desktop, that they lose the important knowledge of their subordinates when not spending time exercising with them (PC7, PC10, PC12, PC13). One platoon commander explain: “At this work, it is important as a manager to know the subordinates well. Especially because of the tasks that we can be confronted with, it is important that I know them and that they know me. Basically, inside and out, so that everyone knows what the others go for. If I am not out at the operations enough time, as I feel that I am not. I do not feel I have the same control over them and they do not have the same control over me which creates problem. They feel insecure, which in the end also can result in them quitting their job” (PC7).

PC6 describe the conflicting opinion of wanting to be out with the platoon, but in the actual role of today need to pay out salary and watch over other rights for subordinates’. To keep a good relation with the soldier PC6 believe it is important to not miss the task of giving them
salary. “If one cannot give them salary home in Sweden where it is peace, then they will not trust me out in the sandbox” (PC6). Another platoon commander describe: “I am educated to be a commander and lead my unit. I will become particularly worthless in doing that if the worst would happen or if I go abroad or whatever it can be. I will be particularly bad at that since I am only sitting and typing on the computer. That is not how I see the role of an officer, especially not at this level” (PC8). Similarly, another platoon commander enlightens the issue that they are not educated to do administrative tasks. PC5 explain: “Platoon commanders’ and company commanders’ role have changed so much that you are more of an administrator than what you perhaps are educated to be. We are educated and trained to lead in tough situations for example in combat. Anyway, I think I have been sufficiently good at working with PRIO. Therefore I have time to train myself in my main work tasks, while others think they put too much time in front of the computer. I think that probably depends a little bit on how you view the system and if you dare to priorities away certain things and so on”.

While PC5 think that there is time left to do the practical tasks, other respondents do not agree. Instead they think a platoon commander should be out in the field, control, educate and make sure that the platoon reach the goals and at the same time do the administrative tasks behind the computer. But as it is today they believe that the balance is wrong, and that the administrative tasks take overhand (PC7, PC8, PC10, PC12, PC13, CC2). One respondent explain: “Personally, I think PRIO take too much time for me. I want to be more out in the field. But I am stuck behind the computer more than I think I should. I have more office hours than I have out in the field and I see that as a disadvantage. On the other hand, you knew it was going to be this way but it is a pity actually” (PC13). Similarly PC2 explain: “I do not think it is particularly funny, but I understand that I have to do it. Of course I would rather follow up my unit and so forth, use the time to plan operations so it becomes more optimal” (PC2). Another platoon commander explain how the practical work tasks are delegated because the respondent must priorities the computer work: “I should be able to lead the platoon in armed combat and if I should be good at that I have to let go of the administrative tasks. I have an executive officer and that person take more and more of the practical work tasks. And for me who have grown up with the old system where you did both, it is somewhat an identity crisis to be required to let go of tasks and delegate it to that person” (PC11).

Further, PC10 describe that platoon commanders who are at the lowest level not should do this much administrative tasks: “...when I think of a military it is not someone who is sitting behind a desktop. I imagine someone who is out in the forest or practice different combat
situations. Of course, someone must attest and plan, but one think that it is the officers higher up in the organization, sitting at the office. But us, who are farthest out on the line, we should be with our soldiers, educate, and teach them. Not sit behind a computer” (PC10). Another platoon commander argue that they should not be required to do the tasks with PRIO at all: “I do not actually have any problems with the system, it is more that I should not be required to do the tasks that I do with PRIO” (PC8). The platoon commander describe the administrative work with PRIO as a necessary evil: “In fact, it is the work we do out in the field that is important. What we do at home is only a way to perform better when we do our service, and our service is actually to defend Sweden. The administration becomes a necessary evil that has to be done. The administration can never become a main task, at least not at this level” (PC8). Additionally, CC2 describes how the work with PRIO is viewed: “It is the platoon commanders who do the dirty work at their level. They are the ones who are under the highest pressure. This is how it is, specifically when it comes to the system PRIO”.

**EDUCATION AND SUPPORT**

The respondents have a common view that the education and support could have been better (PC1-PC9, PC11). Some of the respondents describe that they got a brief overview of how to use PRIO from a Power Point presentation before the implementation, but this did not help them much (PC1, PC3, PC5). They had forgotten about it when it was time to start using PRIO (PC7-PC9, PC12). Additionally, the respondents describe they have been directed to do courses in how to use PRIO, individually through the ADL-portal (PC1-PC6, PC8, PC14, CC1-CC3). Some of the respondents argue that the ADL-portal has not helped them that much, that those courses are not pedagogical (PC2, PC8). Top management have trusted that these ADL-educations are enough, and underestimated the actual need for education (PC6, PC14). CC2 explain that it also takes time to do the ADL-educations and many employees do not have time for it. PC4 describe that the ADL-educations take long time to do and that it in the beginning was difficult when not having any basic understanding for PRIO.

The respondents describe how they have learned the system by themselves. They have learned by trying and when it does not work, they call the service desk or ask someone in the corridor, someone they know have better knowledge about the system. (PC1-PC5, PC7-PC8, PC11, CC1, CC2). Some of the respondents also express it as frustrating in the beginning, because when something did not work in the system, they called the service desk and they did not have knowledge about it either. One of the respondent describe an education for all users in
the beginning of the implementation but that the educators themselves had problems teaching
the system to the users, because they did not have all the knowledge about it (PC5, PC14).
When doing ADL-courses P8 describe: “One did not need to think at all, most people just
clicked-through that education. Of course one has responsibility to learn, but I believe it is
the wrong way to manage education. It is not the way we work in the Armed Forces”. Several
of the respondents describe it would have been better to have someone that have good
knowledge about the system from the beginning who could teach them what they need to
know about the system as a platoon commander. They also express that it would have been
beneficial and easier to have someone beside them which they could ask questions to. The
organization could have provided better educated personnel at lower levels in the organization
who could provide support and education (PC5, PC4, PC11).

Above the empirical findings from the 17 interviews conducted, is presented. Below, the
study continues with an analysis of the empirical material, which is analysed by the terms and
concepts formulated in the literature review. These terms and concept also set the disposition
of the analysis.

VI. ANALYSIS

COMMUNICATION

Lack in communication, for example ineffective outgoing communication can affect the
implementation of an ERP system (Lorenzi & Riley, 2003). In the Swedish Armed Forces
there was an outgoing communication from top management regarding PRIO. Most of the
respondents attended information meetings prior to the implementation (PC1-PC3, PC5, PC6,
PC8, PC10, CC1, CC3) to which some of them refer to as revival meetings were positive
people tried to convince about the system’s excellence (PC1-PC3, PC5, PC6, PC10, CC1).
The respondents describe how top management wanted to convince them about the systems
excellence and that the informants were positive. This is in line with previous research who
claims that top management commitment is important for ERP system implementation
success (Bhatti, 2005; Bingi et al., 1999; Holland and Light, 1999; Zhang et al., 2002).
However, PC3 described that the positive feeling top management had made people even
more sceptical. Also, the top management or the informants were positive when talking on the
stage but PC9 describes how they only acted as they were positive: “At the information
meeting they said it was fantastic. But later, when talking to them during a coffee break or in other situations they were just as dissatisfied as one self” (PC9).

Due to the communication from top management, there was an understanding among the respondents of the reason why the system has been implemented and they understood what new roles and responsibilities the system would bring. That it would put different demands on managers (CC3), that the role of platoon commanders would change (PC4), that they would do more administrative tasks and sit more behind the computer (PC5). As such, the communication from top management was successful if relating it to Lorenzi and Riley (2003) who describes the importance that top management clearly define and communicate new roles and responsibilities and that if this is lacking it can lead to a failing implementation process.

However, even if the new roles and responsibilities were well communicated and understood by the respondents, that did not imply that the implementation would be smooth, as Lorenzi and Riley (2003) suggests. The empirical findings provide a picture of that reason: “Platoon commanders were negative to the administration, that they should be more tied to office spaces instead of being out in the forest and at firing ranges” (CC3). The respondents also described how the respondent instantly became defensive when finding it out (CC3). Further PC4 describe that the respondent expected that the role of the platoon commander would change compare to how it was before, in 2008, and the respondent explain that this apprehension came true. Similarly PC5 explain: “...it was also an intrinsic fear among many officers that they would be caught behind the desktop even more than they previously were”.

**THE TECHNOLOGY’S STRUCTURAL POTENTIAL**

**THE TECHNOLOGY’S STRUCTURAL FEATURES**

With PRIO, managers in the Swedish Armed Forces have been put under totally different demands compared to before the implementation (CC3). According to the respondents every manager with staff liability in the organization has a “hat” in PRIO (CC3). Everything that have to be accepted such as courses, vacations and salaries connected to subordinates, as well as registration of subordinates planned working hours, are tasks that can only be done by the subordinates closest manager, owning the right “hat” (PC12). PC1 explain how the respondent is the only one who can approve the respondent’s subordinates work time. Therefore, the respondent physically has to be at the office to push the acceptance-button.
This can be connected to DeSanctis and Poole (1994) who describes technology systems as consisting of specific rules which together with resources are mediated through the design of the system, the technology’s structural features. The responsibilities connected to the “hat” cannot be delegated to others. The platoon commanders cannot make the choice to let someone else do the actual work, regardless of their opinion. If delegating some assignments, it has to be some of the practical tasks (PC11). The “hat” can therefore be seen as a rule, something that limits the options of how to use PRIO. Other rules are connected to the working hours which have hundreds of codes depending on one’s working hours (PC1-PC14). According to DeSanctis and Poole (1994) the more limited the possible actions the user can choose between are the more restrictive a system is. PRIO provides social structures which the respondents need to adapt to because they do not have any other option.

From the respondents’ point of view, PRIO does also come with extra possibilities, what DeSanctis and Poole (1994) explains as resources. These resources are expressed by the respondents as for example to have all information gathered in one system. It provides a good overview of subordinates and, if doing it right, one can quickly get a current list of kindred and other reports. (PC1-PC5, PC7-PC10, PC13, PC14, CC2) One respondent explain the benefits with PRIO, arguing that it is a system which is created to administrative basically everything, all you need to handle personnel but also other different functions such as purchase, courses and traveling administration (PC11). Additionally, two other respondents argue that one benefit with the system is the purchasing part; with a catalogue where one easy can find equipment and order them (PC2, PC3). PC13 also argue that to report own working hours with PRIO is smooth and another respondent (PC6) describe that a lot of the personnel administration done with PRIO would have taken longer time if using some sort of Excel-sheet.

THE TECHNOLOGY’S SPIRIT
DeSanctis and Poole (1994) argues that the technology has a spirit, which is the official way of how the technology wants people to act when using the system and how to interpret its features. It could for example be how the features are named and presented or the nature of the user interface. This can be connected to PRIO where the respondents commonly mention the user interface of the system and describe that it looks old-fashioned and is illogical. The spirit of PRIO can further be explained by how the features in PRIO are named and presented. The respondents describe that there are a lot of buttons, subtitles and codes in PRIO (PC8-
PC10, PC12-PC14). Another example is that the system only shows names and not positions numbers and that it presents days and not weeks (PC13, PC14).

**THE ERP SYSTEM CONFLICTING WITH ORGANIZATIONAL SOCIAL STRUCTURES**

**LANGUAGE**

The respondents describe some issues related to the spirit of PRIO. Some platoon and company commanders explain how PRIO uses another technical language than they use in the military, particularly among officers (PC13, PC14, CC2). That the information that they have might exist in the system but that they do not know how to find it because the system have named things differently than how they are used to talk (CC2). The respondents describe that there are a lot of buttons, subtitles and codes in PRIO, which are illogical. (PC8-PC10, PC12-PC14) Signs saying “ok” and “stop” do not exist, instead there are signs saying “Release” or “Allocate to me” (PC14). PC14 express: “What does that mean? It is impossible to figure out. No one understands”. As mentioned, PRIO only presented the names of employees but in the organization, individuals often uses position numbers instead of names when referring to a person which created additional work (PC14). Also, as PRIO only presented days and not weeks created a conflict since employees in the organization normally talk and plan in weeks (PC13, PC14). Why the respondent think about PRIO in this way can be explained by the social structure in the organization which consists of the language individuals use, a shared vocabulary or shared way of talking that are different from those in other organizations (Hatch and Cunliffe, 2006). This suggests that the organizational social structure in terms of the language do not match with the system and collides with the spirit. This can be related to DeSanctis and Poole’s (1994) who describe that the technology can provide unclear and inconsistent spirit which influences the users in what they think of the technology.

According to DeSanctis and Poole (1994), the spirit of the technology can also be what online guidance facilities or training materials that are provided with the system. The respondents describe that they have been offered, and that it exists, education in how to use PRIO. The respondents describe courses in an ADL-portal which they can do individually through the computer (PC1-PC6, PC8, PC14, CC1-CC3). They were directed to do these courses and top management trusted in the ADL-educations, but it have not been enough (PC6, PC14). Despite the fact there were educations, which is in line with what previous research show is important (Bhatti, 2005; Bingi et al., 1999; Zhang et al., 2002), the way the educations were
designed, the spirit have not matched the employees’ way to work or what Fleetwood (2008) describe as practices which is a part of the social structure. Some expressed these courses as not being pedagogical (PC2, PC8). PC8 describe: "One did not need to think at all, most people just clicked-through that education. Of course one has responsibility to learn, but I believe it is the wrong way to manage education. It is not the way we work in the Armed Forces”.

According to DeSanctis and Pooles (1994), structural features and the spirit of the technology form its structural potential. If linking these together, the spirit of the PRIO is unclear for the respondents. One the contrary, many of them argue that it do not matter that much because it is mostly about learning how to use PRIO (CC1, PC1, PC2). As described previously the respondents also argue that the system provides some resources to use in their work. The main issue is rather the technology's structural features, which according to DeSanctis and Poole (1994) includes the rules of the system, the demands the system puts on managers, and the restrictiveness it provides. This collides with the organizational social structures. One platoon commander argue that they should not be required to do the tasks with PRIO at all: “I do not actually have any problems with the system, it is more that I should not be required to do the tasks that I do with PRIO” (PC8). Orlikowski (1992) and DeSanctis and Poole (1994) describe how social structures affect the implementation and how employees think about and use the technology. This is distinctly visible among the respondents in the organization and is further analysed below.

DIVISION OF LABOUR AND THE ROLE

Regarding platoon commanders, PRIO have not only provided a new way to perform the same tasks as before the implementation. Instead, the platoon commanders have been given totally new tasks which have turned them to a “desktop person” compared to before when their main tasks were to be out in the field, lead its platoon and follow up operations (PC6). How responsibilities and assignments are distributed within the organization is connected to the division of labour (Hatch & Cunliffe, 2006) and what roles employees have (Fleetwood, 2008) which have been changed in the organization. For example, PC5 explain that the role of platoon commanders and company commanders have changed a lot, that they are more of an administrator than what they perhaps are educated to be: “…We are educated and trained to lead in tough situations for example in combat...” (PC5).
The changes in the responsibilities and tasks as well as the role, is in some ways enforced by the social structures in PRIO such as the “hat” every manager with staff liability have. Task connected to the “hat” cannot be delegated. One respondent describe a situation that can occur. If a soldier is commanded on an operation and the platoon commander owning the “hat” connected to the soldier is not there to accept it, the situation will become complicated because no one else has the right to push the acceptance-button (PC1). This is further visualized by the registration of working hours with PRIO. PC13 explain that it would be easy if everyone worked from 8 am to 5 pm because that is how the system is built. But often, individuals perform different work tasks over a period of time. If the working hours are different between each subordinate, it requires even more time than if all subordinates have the same tasks and the same working hours. (PC1-PC14)

As described previously, the administrative tasks with PRIO connected to the “hats”, are according to DeSanctis and Poole (1994) rules and cannot be delegated. Therefore platoon commanders are forced to delegate more practical tasks, if needed due to time constrains. PC11 describe the delegation of practical tasks, such as being out in the field, as an identity crisis. This can be related to DeSanctis and Poole (1994) who describe how individuals relate to history of task accomplishment in their interaction with technology and how that affect what they think of it. Company commanders on the other hand have the possibility to delegate some of the tasks with PRIO. CC1 explain: “…I am shrewd so I am delegating all purchases I need to do to someone else. And then, someone else can sit and be wilful with that and I can gladly do something else (...) I am letting others do the dirty work such as purchases, planning of working hours and those things that are time consuming”. This can also be connected to Fleetwood (2008) who argues that people consciously take social structures into consideration when they reflect upon potential ways of action.

NORMS
Organizational social structures also consist of norms (Giddens, 1984) which affect the implementation and how employees think about and use the technology (Orlikowski, 1992; DeSanctis & Poole, 1994). This is visible among the platoon commanders who think the tasks with PRIO as well as additional administration take overhand, that it takes too much time from their main tasks which they think is to be out in the field leading, controlling and educate their platoon (PC7, PC8, PC10, PC12, PC13, CC2) This is further evident in the findings where several of the respondents describe that platoon commanders who are at their
level of officers not should do this much administrative tasks. When they think of a military at their level it is not someone who is sitting behind a desktop. They imagine someone who is out in the forest or practice different combat situations, be with the soldiers, educate and teach them. (PC7, PC8, PC10, PC12, PC13) Additionally one respondent explain the administrative tasks with PRIO as a necessary evil which has to be done (PC8).

This is also explained by CC3 who think the role of a company commander and also platoon commanders’ role as it is today is conflicting with what they should do. The company commander explains that today, all managers do other things than leading the units. The respondent argue that managers are leading its work but only through administration and not by leading them out in the field, which they should: “...We get skilled in administering salaries and do travel reservations but not to organize fire and movement, relocation in terrain and confront enemies which I think is what we actually should do at the position we have” (CC3). What the respondents describe can be linked to what Wanyama and Zheng (2011) describe as the norms in the organization, the individuals expectation of one’s rights and duties which platoon commanders take on when reflecting upon their work with PRIO. This is also linked to DeSanctis and Poole (1994) who explain how mode of conduct influences how people think about the technology. Williams (cited in Gibbs, 1965, p.857) describe that norms are rules of conduct which define what should and should not be done by different individuals in different kinds of situations. This is further visible among the respondents where it becomes a conflicting situation, where they think they should have more time together with their soldiers (PC2, PC8, PC9) and that in the way they behave today subordinates will lose respect and trust for them if they only sit behind the computer (PC7, PC10, PC12, PC13). One of the respondents also describe that what is judged in the end is not how good you have been to administrate the platoon but how you perform in the field and solve the things that your platoon should solve (CC3).

A quotation from the findings explain further how the social structures, the norms which define what should and should not be done by different individuals in different kinds of situations affect how platoon commanders think about PRIO: “I am educated to be a commander and lead my unit. I will become particularly worthless in doing that if the worst would happen or if I go abroad or whatever it can be. I will be particularly bad at that since I am only sitting and typing on the computer. That is not how I see the role of an officer, especially not at this level” (PC8). CC3 describe how the doctrine in the organization is built on leadership and how that becomes difficult to maintain when platoon commanders today are
those who train and exercise the least. This will result in them being the worst when it really counts out in the field. That this goes against what their leadership doctrines say. This can also be connected to the norms which dictate what behaviour individuals in an organization can enact (Lapinski & Rimal, 2005) which affect how the respondents think about the technology (Orlikowski, 1992; DeSanctis & Poole, 1994).

VII. CONCLUSIONS

This study contributes to research by exploring what relationship that exists or do not exist between ERP system and organizational social structures in a military organization, and how this has affected the implementation and use. This is done by using ideas from structuration theories and theories around the concept organizational social structure. As shown in the analysis, the ERP system, PRIO provides structural features with rules that are restrictive. Because of the restrictive rules, the respondents do not have any other option than to use the system. Therefore, PRIO change part of the organizational social structures, the division of labour, in the Swedish Armed Forces. As such, the implementation of PRIO has resulted in new roles which the respondents have been forced to adapt to. However, the platoon commanders and the company commanders relate to history of task accomplishment when they think about the system. They also relate to organizational social structures, in terms of norms such as how platoon commanders should lead their soldiers, exercise and prepare for combat operations, which do not match with the structural features of PRIO. This suggests that there is a misfit in the relationship that exists between the ERP system PRIO and the organizational social structures in the Swedish Armed Forces. This misfit between PRIO and the social structures in the Swedish Armed Forces have made platoon commanders but also company commanders negative and restrictive against the system.

The findings of the study show that there are not the technical shortcomings, such as the user interface, that are the main problem. Instead the major problem is the structure of the system which comes with new tasks for the platoon commanders and collides with the organizational social structures. This suggests that it may not matter how good the interface or the technology in itself is because employees might have been negative about PRIO anyway. This since platoon commanders as well as company commander do not think that platoon commanders are best suited to do the tasks with PRIO but instead should be out in the field which was the situation before the implementation.
This study focuses mainly on platoon commanders, managers with staff liability at the lowest level, but also to some extent on company commanders, managers with staff liability at the second lowest level. This brings its limitations. The Swedish Armed Forces is a large organization and employees have different work tasks, positions and have probably been affected by PRIO in different ways. Also, since PRIO is a complex ERP system, the respondents in this study do not get in direct contact with all parts of the system in their work which other employees at other positions may do. As previously explained, this study intends to provide a unique and in-depth understanding in a military organization. For future research it could be of interest to do a similar study but in other public sector organizations that have implemented an ERP system. Other public sector organization could for example be hospitals or the police where many employees have tasks of a more practical character.
REFERENCES


## APPENDICIES

### APPENDIX A: INTERVIEW GUIDE

<table>
<thead>
<tr>
<th>Swedish</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hur länge har du arbetat inom försvarsmakten?</td>
<td>How long have you been working in the Swedish Armed Forces?</td>
</tr>
<tr>
<td>Vilka arbetsuppgifter har du?</td>
<td>What work tasks do you have?</td>
</tr>
<tr>
<td>Hur länge har du haft den position du har idag?</td>
<td>How long have you been at the position you have today?</td>
</tr>
<tr>
<td>På vilket sätt använder du PRIO i ditt dagliga arbete? Hur, varför och när?</td>
<td>In what way do you use PRIO in your work? How, why and when?</td>
</tr>
<tr>
<td>Hur mycket tid lägger du på arbetsuppgifter i PRIO per vecka/månad?</td>
<td>How much time do you spend on work tasks with PRIO per week/month?</td>
</tr>
<tr>
<td>Vilka för- och nackdelar ser du med PRIO? Kan du nämna några exempel?</td>
<td>What advantages and disadvantages do you see with PRIO? Can you give any examples?</td>
</tr>
<tr>
<td>Arbetade du med det systemet(en) som fanns innan PRIO? Om ja, vad tyckte du om det systemet(en) (fördelar/nackdelar)?</td>
<td>Did you work with the system(s) that existed before PRIO? If yes, what did you think of it (advantages/disadvantages)?</td>
</tr>
<tr>
<td>Har du blivit erbjuden någon utbildning i hur du ska använda PRIO? Om ja, vilken typ av utbildning? Gick du den/gjorde du den?</td>
<td>Have you been offered any education in how to use PRIO? If yes, which type of education? Did you take part of it?</td>
</tr>
<tr>
<td>Om ja på föregående fråga: Har utbildningen varit användbar? Om nej: Hur har det gått att arbeta i PRIO utan utbildning?</td>
<td>If yes to the previous question: Have the education been useful? If no: How has it worked to use PRIO without education?</td>
</tr>
<tr>
<td>Hur har förändringar inom organisationen påverkat ditt arbete?</td>
<td>How have changes in the organization affected your work?</td>
</tr>
<tr>
<td>Hur tycker du att det fungerar med de arbetsuppgifter du har idag? Räcker tiden till?</td>
<td>How do you think it works with the work tasks you have today? Do you have time for everything?</td>
</tr>
<tr>
<td>Tycker du att arbetsuppgifterna stämmer överens med de övergripande målen i organisationen?</td>
<td>Do you think the work tasks are consistent with the overall goals in the organization?</td>
</tr>
<tr>
<td>Hur upplever du att dina arbetsuppgifter har förändrats? Utmanande, rutinnässigt, roliga eller tråkiga?</td>
<td>How do you perceive that your work tasks have changed? Challenging, routine, fun or boring?</td>
</tr>
<tr>
<td>Vad anser du att en plutonchefs och en kompanichefs arbetsuppgifter bör vara?</td>
<td>What do you think a platoon commander’s and a company commander’s work tasks should be?</td>
</tr>
<tr>
<td>Hur upplever du vad andra anställda har för uppfattning om vad en plutonchefs och en kompanichefs uppgifter bör vara?</td>
<td>How do you perceive what idea other employees have regarding what a platoon commander’s and a company commander’s work tasks should be?</td>
</tr>
<tr>
<td>Vad hade du för tankar kring PRIO när du fick veta att det skulle införas?</td>
<td>What thoughts did you have concerning PRIO when you found out about the implementation?</td>
</tr>
<tr>
<td>Har de tankarna förändrats sedan införandet? Om så är fallet, hur har det förändrats?</td>
<td>Have these thoughts changed since the implementation? If so, how have it changed?</td>
</tr>
<tr>
<td>Vad och hur har införandet av PRIO kommunikerats från ledningen? Har det som sagt stämt överens med hur det blivit/är?</td>
<td>What and how have the implementation of PRIO been communicated from top management? Has that been consistent with how it is and how it has become?</td>
</tr>
<tr>
<td>Hur upplever du att inställningen bland de anställda och specifikt plutonchefer var när de fick veta om införandet av PRIO? Kan du ge exempel på vad som sades? Varför tror du?</td>
<td>How do you perceive that the attitude was among employees and specifically platoon commanders when they found out about the implementation of PRIO? Can you give any example of what they said? Why do think?</td>
</tr>
<tr>
<td>Hur upplever du att inställningen bland dina kollegor är nu gällande PRIO?</td>
<td>How do you perceive that the attitude is among your colleagues regarding PRIO?</td>
</tr>
<tr>
<td>Hur pratar dina kollegor med varandra om PRIO? Skulle du kunna ge exempel på hur “snacket går”? Vad beror det på tror du?</td>
<td>How are your colleagues talking with each other about PRIO? Could you give any example of how “the talking is”? Why do you think is the reason for that?</td>
</tr>
<tr>
<td>Är anledningen till varför PRIO införts genomförts något “som en vet”?</td>
<td>Is the reason for implementing PRIO something that you and other colleagues know?</td>
</tr>
<tr>
<td>Vad tycker du hade kunnat göras annorlunda?</td>
<td>What do you think could have been done differently?</td>
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**APPENDIX B: TRANSLATION OF TECHNICAL TERMS**

<table>
<thead>
<tr>
<th>Swedish</th>
<th>English</th>
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</thead>
<tbody>
<tr>
<td>Pluton</td>
<td>Platoon</td>
</tr>
<tr>
<td>Plutonchef</td>
<td>Platoon commander</td>
</tr>
<tr>
<td>Kompani</td>
<td>Company</td>
</tr>
<tr>
<td>Kompanichef</td>
<td>Company commander</td>
</tr>
<tr>
<td>Värnplikt</td>
<td>Conscription</td>
</tr>
<tr>
<td>Värnpliktig</td>
<td>Conscript</td>
</tr>
<tr>
<td>Insatsförsvar</td>
<td>Professional military force/Expeditionary military force</td>
</tr>
<tr>
<td>Innovationsförsvar</td>
<td>Concept of territorial defence</td>
</tr>
<tr>
<td>Insatsförband/förband</td>
<td>Unit</td>
</tr>
<tr>
<td>Regemente, grupp personer</td>
<td>Regiment</td>
</tr>
<tr>
<td>Regemente, fysisk plats</td>
<td>Base</td>
</tr>
<tr>
<td>Bataljon</td>
<td>Battalion</td>
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</tbody>
</table>