
Realising what's missing: how does the sense of organisational belonging influence the success of enterprise resources planning implementation?

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Abstract: This paper examines the question of how the sense of belonging to an organisation on the part of the organisation's employees influences the success of the process of enterprise resources planning (ERP) implementation. The research seeks to address this question by employing a qualitative case study methodology, and specifically by conducting semi-structured interviews with an information technology (IT) manager, developers, implementers and users, and university managers. The study finds that a sense of organisational belonging influences the success of ERP implementation through psychological and managerial means, and through the use of power. It also includes recommendations from the perspective of the participants regarding how a sense of organisational belonging can promote this success.

Keywords: organisational belonging; ERP systems; ERP implementation; case study.

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1 Introduction

Enterprise resources planning (ERP) systems are information systems (IS) that integrate the processes in an organisation using a common database, and shared reporting tools [see, for example, Dredden and Bergdolt (2007), and Finney and Corbett (2007)]. These integrated systems serve many functionalities in an organisation, and are popular in both developed and developing countries (Huang and Palvia, 2001).

Multiple factors account for the success of ERP, including the user satisfaction it promotes, the attendant improvements to business performance, cost efficiency, system acceptance and usage, and facilitation when achieving predetermined corporate goals (Zhang et al., 2005). Meanwhile, leadership can influence organisational culture by supporting aspects such as learning, the sharing of decision-making, and power-sharing; all of which influence the success of ERP implementation (Ke and Wei, 2008). Additional, organisational factors can also play a role in the process, contributing to understanding of the overall set of aspects that can influence the success of ERP implementation.

This study seeks to explore how organisational belonging can impact on the success of implementation, arguing that if organisations seek to achieve success in this field, then they must consider their belonging to the organisation, since they risk failing to achieve the benefits afforded by ERP if their employees lack this awareness.

This study adds to the field by enhancing information technology (IT) professionals' and organisational members' understanding of the role that the sense of organisational belonging plays for individuals involved in the implementation and use of IT such as ERP. There is currently a lack of comprehensive understanding regarding a number of issues in the field of IS and organisations, and little evidence for how the success of ERP is influenced by organisational issues, such as this sense of belonging. This study also contributes to the current understanding of IS and new approaches in organisations, providing novel information that explains the success of the implementation of ERP systems, with regard to the sense of organisational belonging influencing successful ERP implementation. Moreover, there is also a paucity of evidence in the current IS literature regarding the role of this factor in developing countries, such as Saudi Arabia, which this study addresses.

This paper commences by defining and introducing ERP systems, and the factors determining the success of ERP implementation, then proceeds to explain the current gap in the literature, specifically the influence of the feeling of organisational belonging on the success of ERP implementation. It then presents the theoretical framework employed by the study, to explore how this sense of belonging influences successful ERP implementation, and introduces the methodology and research tools used, which were a case study of a university, and semi-structured interviews with the actors involved in the implementation of ERP. Finally, it discusses the indicators that the employees of the university in question possessed a sense of organisational belonging, and their significance for the success of the ERP implementation.

2 ERP systems

The success of the implementation of IS is determined by the presence of certain factors related to both the implementation of the IS concerned, and its use. A well-known model for determining this includes the aspects of system quality, information quality, use, user satisfaction, and individual and organisational impact (DeLone and McLean, 1992). This model was modified and improved by a number of subsequent studies (for example, DeLone and McLean, 2002).

According to Muscatello (2003, p.850), “Enterprise resource planning systems, if implemented successfully, can bestow impressive strategic, operational and information-related benefits to adopting firms. A failed implementation can often spell financial doom.” A large number of employees in an organisation can play a role in the vision of an implementation and use of ERP, including the corporate information officer, whose role ‘include(s) communicating the vision’ (Willcocks and Sykes, 2000), and consultants, implementers, developers, project managers, and other corporate managers involved in supporting the development and implementation of ERP.

Research in ERP systems commenced in the 1990s at a time when organisations required a greater understanding of the benefits that ERP offered for organisations, and researchers such as Shang and Seddon (2000) explained that ERP can provide a labour cost reductions, productivity improvement, quality improvement, customer services improvement, better resource management, better decision-making, and better performance control, and can support current and future business growth planning, business alliance, organisational changes in business structure and processes, and changed employee behaviour with a shifted focus.

Research in the field then shifted to focus on the planning of ERP, with researchers such as Chen (2001) explaining the need for rigorous planning, acknowledging the new business processes that ERP systems can provide for organisations, and facilitating greater understanding of behavioural changes in those organisations, adopting ERP to influence ERP competencies. This research revealed a major need for organisations to realise certain critical success factors to support the implementation of ERP systems. These factors are considered when implementing ERP, in order to avoid failure, and include senior management support, clear goals and objectives, company-wide support, communication, visibility of implementation, training and education, vendor support, business process reengineering, suitability of hardware and software, project management, data accuracy and integrity, company expertise in IT, user characteristics, user participation, cultural fit, user satisfaction, intended business performance improvement, timeliness, remaining within budget, system acceptance and usage, and predetermined corporate goals (Zhang et al., 2005).

The research also demonstrated a need to bolster understanding of the relationship between certain actors responsible for playing a role in implementing ERP systems. For example, a study conducted by Law and Ngai (2007) explained that the closer the IT managers, or other actors responsible for ERP implementation, are to senior managers, the more support they receive. Meanwhile, Pollock and Cornford (2004) explored the tensions within ERP systems and organisations, focusing on the needs and requirements for organisations and the organisational structure, and processes required for ERP.

In addition, the extant research in ERP systems explored their benefits (Chou and Chang, 2008), the reasons for failure (for example, Scott, 1999), the critical factors required for success (Holland and Light, 1999), and the planning process required for

introducing ERP systems (Holsapple and Sena, 2005). Meanwhile, other studies evaluated how ERP systems influence organisations in terms of their structure or behaviour (for example, Ke and Wei, 2008), and the role that ERP plays in managing organisational functionalities by improving their performance and productivity (for example, Velcu, 2007). However, there is currently a lack of studies examining how employees' sense of organisational belonging influences the process of implementing ERP in organisations, despite a need to understand its role.

3 ERP systems implementation success

Delone and McLean (1992) put a huge effort into defining IS success in a model including the following:

- 1 System quality: The required features of an IS itself.
- 2 Information quality: The required features of the product of an IS.
- 3 Use: The recipient utilisation of the product of an IS.
- 4 User satisfaction: The recipient's reaction to the use of the outcome of an IS.
- 5 Individual impact: The influence of information on the behaviour of a recipient.
- 6 Organisational impact: The influence of information on organisational performance.

There is no agreement regarding what constitutes ERP systems implementation success (Zhang et al., 2005). One expression by Hong and Kim (2002) explains that ERP project success is when projects achieve goals that have been set in terms of expected cost, time, system performance and benefits. Many authors, such as McGinnis and Huang (2007), explained that ERP implementation success relies on continuous development work, beginning with the start-up of the project and continuing until successful ERP implementation has been achieved. Thus, the success of Enterprise systems influences organisations in many ways, i.e., enhancing customer services, increasing employee's productivity, reducing working costs (Ang et al., 1994).

To measure and understand ERP implementation success, a huge number of researchers have described critical success factors for ERP implementation (Holland and Light, 1999; Nah et al., 2001; Almajali et al., 2016). These ERP critical success factors can be organisational (Hong and Kim, 2002), strategic, or tactical (Holland and Light, 1999). Organisational factors include delivering top management support, user training and education, enterprise wide communication, user satisfaction, and organisational impact (Dezdar and Ainin, 2011). The strategic factors include being aware of the influence of legacy systems in the implementation, the business vision and role of ERP systems in it, and important factors that organisations and implementers should set out to devise a clear ERP strategy. Furthermore, good planning is also essential. The tactical factors that are present need to include clients, consultation, software configuration, client acceptance, monitoring and feedback (Holland and Light, 1999).

The existing literature suggests a lack of understanding about how individual feelings toward an organisation can play a role in its success. In Delone and McLean's (1992) model of IS success, we see that the recipient's response to the use of the product of an IS is a major example of IS success. From this understanding, researching how

organisational belonging influences ERP implementation success is one way to push forward our understanding of reasons for user resistance. Therefore, this case study tries to understand the additional reasons for organisational members' behaviour toward ERP systems implementation success.

4 The gaps in the extant ERP implementation literature

It is unclear why the IS community has, to date, ignored the importance of the sense of belonging to an organisation felt by its employees, and how this influences the success of ERP implementation. In addition, while it is recognised that an important aspect of a successful ERP implementation is the appropriate application of change management strategies, how the effect of the sense of belonging on changes management has thus far been overlooked. The extant studies in the field encompassed a range of topics, including the effects that resistance to a new ERP might have on an organisation assessed by Hurt (2011). However, this study failed to consider that the sense of organisational belonging can play a role in explaining such resistance, and can be a central reason behind other reasons. Moreover, while Al-Shamlan and Al-Mudimigh (2011) explored the change management strategies that promote ERP success, they also failed to consider the deeper factor of the sense of organisational belonging felt by employees. Meanwhile, other factors that play a role in change management that were identified in the extant literature, such as performance, communication, collaboration/participation, business process reengineering, training, acceptance, and the influence of decision-making (Ranjan et al., 2016) also exclude consideration of this factor.

By employing the theoretical understanding presented in organisational psychology literature (for example, Masterson and Stamper, 2003), it is evident that the influence of the feeling of organisational belonging has a role to play in the success of ERP implementation, since belonging to a group involves a considerable effort to gain the right to belong, and to be related to the group, or organisation. This gaining of the right to belong, and the related investment on the part of the employee, has the result that the individual is invested in ensuring the success of an organisation's implementation, application, and use of an ERP system. In contrast, if an employee lacks this sense of belonging, boundaries are present between the organisation and the individual, who is likely to prove less willing to invest wholeheartedly in the success of ERP implementation. Indeed, the more boundaries created, the less the sense of belonging to the organisation is promoted, which causes a reduced degree of attention to information and knowledge, and therefore a lower sense of intimacy or acceptance of the organisation by its employees, all of which can play a significant role in technology implementation. Nevertheless, a sense of organisational belonging can engender a reduced responsibility toward the efforts involved in ERP implementation, although this does negatively affect the success of an ERP system's implementation.

5 Realising a sense of organisational belonging

Theories are generally understood as abstract entities that seek to describe, explain, and enhance understanding of the world, and, in some cases, to provide predictions regarding

future events, and to provide a basis for intervention and action (Gregor, 2006). According to Gregor (2006), theorists in IS seek to produce theories for either:

- 1 analysing
- 2 explaining
- 3 predicting
- 4 explaining and predicting
- 5 for design and action.

Hence, the primary goal of the present research was to obtain a theoretical understanding of how a sense of organisational belonging influences the successful implementation of an ERP system. It sought to achieve this by employing the theoretical basis of the extant organisational psychology literature to analyse and theorise the factors engendering the sense of organisational belonging, and its impact on the success of ERP implementation.

As a field, organisational psychology is interested in aspects of psychology that are fundamental to the workplace (Aamodt, 2012), exploring topics such as employee motivation, performance evaluation, and organisational communication and decision-making as factors that play a role in improving, employing, and implementing IS, or which are influenced by IS. The sense of organisational belonging can play a role in improving the management involved in implementing ERP systems in organisations. Meanwhile, discounting the notion of belonging can cause serious problems for the well-being of employees (Mellor et al., 2008), and a failure encountered in the implementation of an ERP system, and for example, user resistance, may be a result of a lack of a sense of belonging, and of the subsequent lack of well-being in the users who are the employees of the organisation.

Authors, such as Tabatabaee et al. (2016, p.184) expressed organisational belonging as “employees’ connection and dependence on the organization which covers the feeling of occupational involvement, loyalty, and belief in organizational values.” Organisational members apparently passed through three stages when experiencing belonging which are acceptance, conformity, and internalisation. The acceptance stage of belonging means organisational employees need to develop a satisfactory relationship with others in the organisation, which leads them to accept their involvement and guidance from others. It is a clear sign of belonging at this stage that employee feels proud of being members of such an organisation. In addition, the conformity stage of belonging relates to values that need to be accepted and satisfied from organisational members, as these need to be in alignment with their values. Finally, internalisation means that if organisational members become trusted members then they would always work for organisational interests (Tabatabaee et al., 2016).

Organisational belonging has a clear relationship to many concepts, such as organisational identification, organisational cohesion, and organisational citizenship. Organisational identification refers to the awareness that an employee belongs to an organisation. This means it is a sense of agreement or a oneness with the organisation in all aspects (Kim et al., 2010). Cohesion in organisations means employees accept their peers, and adopt collective ground (Morrison, 2008). Also, related to this concept is organisational citizenship behaviour, whereby employees adopt behaviour that is not directly influenced by the reward system, arguing that this can lead to effective

performance within the organisation (Mohammad et al., 2011). Of all these concepts, organisational belonging plays a role in explaining how each works.

In ERP implementation, organisational belonging plays a role in achieving successful implementation and subsequent development. However, because organisational implementation in ERP is complex, and reasons for failure are many, belonging may be a reason to push for successful implementation. ERP implementation resistance may play a role in such resistance to belonging, but at the same time many employees feel they belong and are loyal to their organisation, but that they may oppose certain IS implementation policies. Therefore, belonging can be a factor to consider and study in IS resistance, although each case differs. Organisational belonging and ERP is an important area to study when building a careful analysis and bringing together the angles that implementers take into consideration in ERP implementation.

The reasons why employees experience this sense of belonging to an organisation are not solely because it is their employer, or because of the financial gains this affords them, rather it is rooted in a deep need to belong to any form of social group (Den Hartog et al., 2007). This belonging usually motivates employees, who are members of the social group in the form of the organisation, to collaborate and cooperate with organisation's requirements (ibid.). This importance of this sense of belonging is that it promotes engagement, productivity, and performance (Belle et al., 2015).

Meanwhile, according to De Cremer and Blader (2006), individuals with a robust need to belong usually engage in more careful and systematic processing of information concerning procedural fairness than those who do not. This concept was explored further by Stamper and Masterson (2002), who noted that respectful treatment of workers by managers can be a significant factor in creating a sense of belong within the organisation from the perspective of employees, hence the way in which an organisation treats its employees is crucial. This sense of belonging to an organisation is usually expressed by employees in terms of the organisation being 'my organisation', or 'my job', which Vandewalle et al. (1995, p.210) can be termed 'psychological ownership'.

Meanwhile, how the feeling of belonging to an organisation occurs was explored using social identity theory by Ashforth and Mael (1989), who sought to explain the concept of 'identification' in the context of when a new employees joins an organisation, and becomes part of distinctive groups, and how their success or failure increases the chance of belonging to these groups, observing that such identification does not require robust "leadership or member interdependency, interaction, or cohesion" (p.34), rather that groups usually belong to, or associate themselves with prestigious groups, with the risk that belonging may become painful. By employing this concept of 'identification', the authors sought to describe the notion of oneness within an organisation.

When researching organisational belonging and ERP implementation, it is necessary to obtain an understanding of the organisational player's sense of 'insider status' that reflect his feelings toward the organisation. The player's consequent acceptance of the organisation may influence the success of ERP implementation (Knapp et al., 2014). For example, if an employee does not agree with the organisation's vision, goals and strategies, or the kind of incentives and salary that employees receive, this can cause the employee to feel rejected, which can be a reason for the failure of ERP implementation, as it decreases the sense of ownership, in terms of the 'psychological ownership', of the organisation (Knapp et al., 2014). This issue of organisational belonging also influences the sense of personal fulfilment felt by employees, their belief that they are supported,

and their subsequent participation in the organisation in general terms (Belle et al., 2015), including during ERP implementation.

Numerous studies, including that conducted by Den Hartog et al. (2007), found that this sense of belonging influences cooperation and willingness to assist in achieving an organisation's requirements and needs, and there is therefore a need to assess the way in which it motivates employees to assist in the successful implementation of ERP systems. Moreover, the extant organisational research claims that when organisational members possess a greater sense of belonging, this is likely to create more engagement, higher productivity, and higher performance in the activities of ERP implementation that will ensure its success.

6 University context

This research study employed the interpretive tradition in IS research, together with the ontological belief that the constructivist ideology was the most appropriate approach to employ in the context concerned. According to Orlikowski and Baroudi (1991, p.14), "Ontologically, interpretive information systems research assumes that the social world (that is, social relationships, organizations, division of labours) are not 'given'. But the world is produced and reinforced by humans through action and interaction." Therefore, this study employed a social constructivist position that the social reality of the influence of organisational belonging on ERP implementation can be understood and analysed through the interaction of the actors involved in the ERP implementation, facilitating the interpretation of this belonging.

In order to achieve this, a qualitative methodology was required; obtaining an understanding of organisational belonging, and how it influences ERP implementation success, which necessitated an understanding of the specific situation in which organisational belonging was present, as well as the behaviour it engendered. This was achieved by investigating whether the employees in the context studied felt part of the university that employed them, and a subsequent sense of belonging to it, together with exploring their resulting behaviour in the context of the influence of a sense of organisational belonging on the implementation of an ERP system (Kaplan and Maxwell, 2005).

This study also employed a qualitative case study of a higher education institution in Saudi Arabia, which was selected due to its considerable size, and its vision to become a paperless organisation. It therefore constituted a valuable case study for exploring such a transition, and how the related ERP implementation was conducted, which provided evidence of the challenges of ERP implementation at a university. The university in question was a major university, and was one of the new universities in Saudi Arabia, which was founded in the early 2000s. It had more than 5,000 employees, and more than 60,000 students, along with many different IT systems that were used for different purposes, both academic and administrative.

The responsibilities of the IT department, according to some of interviewees, covered managing all used and suggested policies and strategies to develop IT at the university. The university spent millions of Saudi riyals on ways to improve managerial functioning, such as providing IT systems for managing administrative communications, human resources, finances and warehouses. These IT systems, according to interviewees, had changed the university's style and norms pertaining to how to carry out works and

activities at the university. The university also responded to the fact that new universities do not have a rich culture developed over many years, setting out norms for carrying out work, which makes change easy to achieve.

Some of the interviewees explained the importance of the university's organisational structure, noting that decision-making with regard to policies and strategies in all aspects of university life rests in the hands on the university council. This includes practices such as opening new colleges, offering new degrees, and promoting employees. The university council consisted of a Minister of Education, who is the president of the council, a university rector, deputy rectors, and deans of all deanships at the university, with three expert members from the society. The rector, and the university's daily workers lead the university council in the absence of the council president. The deanship of IT is responsible for all matters pertaining to IT at the university and oversees developing, managing, and implementing the right IT systems at the university.

When asked about the need for ERP systems at the university. The IT manager also said in early 2009 that the ERP had begun to be implemented by many higher education institutions in Saudi Arabia, especially the prominent ones. This led the university to study the benefits an ERP system can provide, such as providing working cycles, reducing costs and importantly sharing information and using it for decision-making productively. These are all reasons that the university became interested in the ERP system. From that point onwards, the university started to look at the options available in the market, their costs and how to implement them. The university bought the system from a local developer, giving them the space to implement the system. The implementation saw challenges to old business processes, including how to improve them in the new ERP system, and saw challenges to the human resources module and finance module regarding the payroll, but overcame these challenges. Also, the system provided services to the warehouses, since the university has a large warehouse creating better management of the material and resources of the university.

It had an ERP system that was developed locally and implemented almost ten years before the date of the study. It was therefore a retrospective study that represented an opportunity for the participants to consider the relevant events with hindsight, and to explain the challenges they faced during the ERP implementation, and how a sense of organisational belonging played a role in its success or failure. In order to understand the sense of organisational belonging involved, the case and its actors were explored in depth, which provided a significant amount of data for addressing this study's research focus.

The ERP implementation at the university dates to the end of the 2000s, and the research was begun in 2018, so is retrospective. Thus, many incidents that occurred during the implementation might be understood differently eight years later. One of the restraints of non-longitudinal studies is that they involve a brief period of time, which is consumed by the organisation collecting the data. In retrospective studies, it is difficult for research respondents to remember certain occasions. Respondents are also open to the misrepresentation of incidents that happened in the ERP implementation. Thus, the precision of the data collected is uncertain, due to the short time period (three months) witnessed by the organisation and because of the type of retrospective studies (Farrall, 1996).

Semi-structured interviews were conducted for the purpose of gathering the data required for this study, as they offer the opportunity to obtain a detailed and in-depth understanding of a topic (Harrell and Bradley, 2009). The interviews were conducted

with a sample population of 25 different actors involved in the ERP implementation, and each lasted approximately one hour. The sample, which included one IT manager, three other departmental managers, five ERP implementers, 13 users, and three IT developers, provided a full picture regarding how organisational belonging can influence the success of an ERP implementation. The data was gathered over a period of approximately three months, from mid-2018 to September 2018. The questions asked were guided by the following topics:

- Why was ERP an important system for the university?
- How was the ERP system implemented?
- What did the participants know about organisational belonging?
- In what ways did they believe that a sense organisational belonging influenced their daily tasks?
- In what ways did they believe, or not believe that organisational belonging had an influence on the success of the ERP implementation?

The interviews were conducted in a conversational manner, ensuring that all of these topics were addressed in an appropriate order for obtaining the required data, and the interviewer probed for further detail where necessary.

Creswell (2013) provided a systematic technique for data analysis including six steps. The analysis started by organising and preparing the data for analysis. This step includes activities that involve writing out the gathered transcribing interviews. Second, the researcher reads the data, and seeks to discern what the interviewee was saying. Third, the analysis stage began with coding the data. Creswell (2013) explained coding as the process of arranging and putting data into segments of text, before explaining the meaning of these sections. This information was then grouped into categories and labelled by the participants. Fourth, coding produces themes for analysis. Descriptions include details regarding the indicators of a sense of organisational belonging to the university, and the implications of organisational belonging on the success of ERP systems implementation. Finally, it interprets the data's meaning (e.g., by comparing the findings with existing literature).

The resulting data obtained was analysed using a Creswell qualitative analysis approach, and by considering the theoretical understanding discussed in the previous section by explaining the results according to certain themes, as the use of theory in this study was "part of an iterative process of data collection and analysis" [Walsham, (1995), p.76]. Three main themes concerning the indicators of a sense of belonging, and its influence on the success of the ERP implementation were generated from the analysis of the interviews: psychological, managerial, and the use of power. Each category included a number of factors demonstrating how these indicators occurred, and their implications for the success of the implementation.

The analysis of this research began when the researcher first read the interview scripts and was able to grasp the overall meaning of the data. Next, the data was coded by dividing it into sections, such as organisational belonging indicators and its implications for the success of ERP implementation success prior to explaining the meaning of the data. Themes were then derived; these aimed to establish the context by understanding the implementation and development of ERP, and the current status of organisational belonging for the employees interviewed. These themes and sub-themes

are psychological, managerial and include issues of use of power at the university. Then the themes were described by determining the majority for each argument and theme. Themes and sub-themes were interpreted using the theories and current ERP literature to examine the results and interpret them. This was done by linking the data to organisational belonging, to come to a theoretical understanding of how organisational belonging influences ERP systems' implementation success. The software N-Vivo was used to help code the interview transcripts.

Table 1 Signs of a sense of belonging to the university

<i>Signs</i>	<i>Evidence</i>
<i>Psychological signs</i>	
1 Shame for belonging to the university.	Majority of participants.
2 Lack of willingness to work, and lack of investment in the organisation.	Majority of participants.
3 Fear of being fired from the university.	Majority of participants.
4 Willingness to play a positive role.	Minority of participants.
5 Direct threat.	Majority of participants.
6 Resisting the ERP.	Majority of participants.
<i>Managerial signs</i>	
1 Poor management on the part of the organisation.	Majority of participants.
2 Work structure.	Majority of participants.
3 Organisational rules protect employees.	Majority of participants.
4 The organisation financially supports its employees.	Majority of participants.
5 Use of organisational resources.	Majority of participants.
6 Acceptance of positive role.	Minority of participants.
7 Public or private interest.	Majority of participants.
8 Collaboration.	Majority of participants.
<i>Use of power</i>	
1 Involvement in the ERP.	Majority of participants.
2 Correct information and input from managers and users.	Majority of participants.
3 Provides useful information.	Majority of participants.
4 Influence specifications and requirements stages.	Majority of participants.
5 Positive helper.	Majority of participants.
6 Complicate implementation process stage.	Majority of participants.
7 Lack of knowledge-sharing.	Majority of participants.

7 Indicators of a sense of belonging to the university

When it implemented its ERP in the late 2000s, the university sought an enterprise system that served the majority of the administrative units, and possessed functionalities that the systems involved supported. The ERP selected primarily supported the finance, human resources, student registration and admissions, and warehouse departments. The

trend at the time in most organisations was to purchase and implement an ERP, due to their many benefits (Shang and Seddon, 2000). Among others, these benefits included firstly the organisational benefits, such as supporting organisational change, and facilitating business learning. Secondly, operational benefits, such as cost and cycle time reduction. Thirdly, managerial benefits, such as better resource management, and improved decision-making and planning. Fourthly, strategic benefits, such as supporting business growth and alliance, and finally IT infrastructure benefits, such as IT cost reduction, and increasing the capabilities of the IT infrastructure.

However, whether organisations achieve these benefits in practice is questionable, since the rate of success was found by Zhang et al. (2003) to be only around 33%, and in counties such as China, to only be around 10%. There are many reasons for the failure of an ERP implementation, such as a failure to comprehend the realities of the organisation (Hawari and Heeks, 2010). A successful ERP implementation requires the involvement of all of the actors who are to interact with the system, as if there is a lack of support, the planned changes will be unsuccessful (Barker and Frolick, 2003). Alongside other factors, the sense of organisational belonging can explain why some ERP implementations succeed or fail. The present study contributed to the field by demonstrating the influence of organisational belonging in this context, by first identifying the signs by which it can be recognised, and then by exploring in depth why it can impact on an ERP implementation. Table 1 presents the signs of organisational belonging that may have influenced the success of the ERP implementation at the university that was the focus of this study.

8 The implications for the success of the ERP implementation

The study found that there are a number of indicators of a sense of organisational belonging, or the lack thereof, that might influence the success of an ERP implementation. The majority of the participants believed there are certain psychological indicators, such as shame of the organisation, a lack of willingness to work, a lack of investment in the organisation, fear of being fired, and a willingness, or otherwise, to play a positive role in the organisation. All of these factors can play a role in resisting an ERP implementation, and therefore in effecting its success. For example, if the employees and users of an ERP are ashamed of the organisation's status in the market, or of the way it is managed, or operated, this might play a significant role in delaying, or causing the failure of the implementation. ERP user stated,

“Since the beginning of my employment, I have felt that the university lacks academic strength, and it is one of universities in the country that has serious problems in treating its employees badly. This makes me truly ashamed to tell others that I work for this university, and that means I make no effort to support attempts to develop the university, because we don't feel it's serious.”

A human resources user stated,

“Take for example the amount of product we produce is decreasing compared with before, even the with the management style we have at the university. So, we have lost faith that we are working to improve the university or the region. We feel unsupported, and this led to your question: does organizational belonging matter in IT implementation, I believe the response to this is yes. If we are given the chance to develop how we think, we could improve HR work

and access the resources needed, in return we will support any approach and include IT initiatives and the previous ERP system.”

The influence of these psychological indicators on the sense of organisational belonging, and the role it plays in the success of an ERP implementation, means that organisations should take the initiative to consider its employees’ well-being. Factors such as an employee’s unwillingness to invest in ERP implementation efforts is one example of a lack of the sense of organisational belonging that can engender user resistance. Previous studies regarding user resistance to ERP implementation, such as those conducted by Ahmed et al. (2006) and Freeze and Schmidt (2015), failed to include this factor.

This present study found that another factor influencing the sense of organisational belonging can be poor organisational management, and the majority of the participants claimed that the work structure at the university, in terms of the way in which work is assigned to employees by their managers, can be unfair to the employees, hence these individuals did not feel that their rights were being observed, and that the organisation did not protect its employees. If the reverse were true, this would positively impact the sense of belonging that would, in turn, promote the success of an ERP implementation. An employee at the human resources stated:

“...my manager placed a considerable workload on me, in terms of work that I should do every day within strict deadlines. This meant that I did not appreciate the organization or the manager, and therefore did not support any technological implementation, because I know it won’t change the way we work, or push us forward.”

The finance manager argued how the pressure created by workload cannot lead to organisational belonging:

“...We believe employees should achieve their potential, and from our preservice we should use all resources to the maximum. The ERP system helped us positively in achieving our targets in regard to, for example, the payroll for all employees in the university. When the employees complain about pressure in other departments I understand their concern, but we in this department tried to employ more employees to handle the workload. So, we ask, does workload influence belonging and in return influence ERP success; from one perspective this might be thought to be the case. If the manager imposes a lot of pressure this can lead to a feeling of rejecting every project the university hopes to achieve, including IT or ERP implementation.”

While the study conducted by Hustad et al. (2016) demonstrated that institutional factors, such as rules, or norms and culture, can influence the success of an ERP implementation, it failed to consider how institutional rules regarding, for example, the degree of workload, or employees’ rights, can play a role in increasing a sense of belonging to an organisation. However, the present study demonstrated that this sense of belonging, and the subsequent support of ERP implementation, can result from strong institutional rules, and vice versa.

The ERP manager stated, with regard to the influence of institutional rules on the feeling of belonging, and its impact as a result in the success of ERP systems implementation:

“Organizational rules in regard to how work is done, how it is managed, and how the university achieves its goals, result from a long history detailing the influence of previous administrations, where employees have been accustomed to carry work in certain ways. The ERP aims for example to improve

decision-making through the use of accurate information and to improve business processes. In these efforts to change the organizations we faced pressure to implement ERP in ways that contradict our training and the targets of ERP systems in the university. These norms and rules play a role in increasing people's belonging to the institutions, and if it is managed well during the implementation, can make the ERP successful and a less complex. I remember two or three people in certain departments quit working for the university when the implementation was most complex, and where there is a strong sense of belonging they chose not to leave the university. They delayed ERP implementation and caused problems that could result in failure if the university were to provide what we needed in the time."

This study also found that employees' involvement in an ERP implementation can be a field in which power is used, either as way of expressing belonging, or otherwise. The factors involved primarily concerned how, when, and where information that is deemed to be useful can be used as a source of power that can significantly influence the ERP specifications and requirements stage, which in turn can influence the success of the ERP implementation. As human resources manager explained, "I agree that belonging is what makes me share my information." The sharing of the correct information can facilitate an ERP implementation process, while incorrect information can complicate it. Therefore, the accumulated knowledge held by employees and users, which can be shared via meetings and other knowledge-exchange vehicles, is valuable for the ERP implementers, as this can promote the success of the implementation, demonstrating that the play of power on all sides is a crucial factor in this context.

In addition, the use of power can function in a supportive role that expresses the sense of belonging as a tool to facilitate change efforts, and it can therefore be an important internal resource for employees who are vital for determining the success or failure of an ERP implementation. As an employee from finance noted,

"The information I have regarding the activities and needs of the department would only be shared if we felt that any new system would make a real change in the organization; there was no point if we were only repeating efforts, and don't feel that we are really part of this organization."

Previous studies, such as that conducted by Allen and Kern (2001), demonstrated that power plays a significant role in either placing obstacles in the way of an ERP implementation, or in supporting it, as employees can use the information they possess, together with their accumulated knowledge, to exercise power to effect the other party, in order to ensure that their interests are met. A sense of organisational belonging helps to forge alliances between members who share the same beliefs, and this can be a means of delaying an ERP implementation, which can result in the failure of the project's management. This sort of alliance can create an arena for political power-play, in which the members seek to prove that the organisation concerned has serious problems, for example in the way it treats its employees, or in failing to protect their interests, in a context in which they feel that only the managerial interests, and the gains they can secure from an ERP implementation, are considered. This engenders in the employees a strong feeling of lack of belonging to the organisation, or engagement in the ERP project, as they feel that they and the organisation are on different sides.

9 Conclusions

The main conclusion of this study was that organisations in general, and universities in particular, must consider the well-being of their employees, as they play an important role in the success of an ERP implementation. The psychological and managerial factors involved in creating a sense of belonging to an organisation, together with those related to the use of power, can seriously damage an organisation's efforts to adopt potential benefits of the digital age, such as implementing an ERP system, as it can play a role in increasing the resistance to new IS in any type of organisation. In addition, inappropriate organisational rules that contradict the interests of employees can cause a sense of non-belonging to the organisation.

Successful organisations must be mindful that the sense of organisational belonging plays a role in the success of the implementation of any new IS, such as ERP, and must therefore obtain an understanding of the factors involved, and create policies to ensure that their employees possess this sense of belonging, such as developing appropriate organisational rules, offering incentives, and treating their employees with respect.

Managers should aim to increase employees' belonging, by building trust and encouraging creativity, which brings together all members of the organisation. Managers should ask all employees to work to realise a vision that integrates their interests and ambitions into it. The manager should also encourage employees to be more aware of the overall aim and objectives of the project, so transparency is needed. Managers should also introduce successful examples to outline how the ERP systems in other organisations improve businesses in many aspects.

Managers have to admire the notion of belonging and take it seriously to understand why employees sometimes behave in certain ways, countering the plan universities have put forward. ERP's failure in terms of implementation might be due to its complexity, the size of the system and its management processes. Thus, ERP failed implementation can be associated with multiple factors, but if a high level of belonging is felt by actors involved in the implementation, this might then increase involvement, productivity, and better performance, which managers need from their employees to support ERP implementation. Belonging as sense or feeling has to be addressed by managers at all levels within the organisation, putting forward the reasons that employees secure this feeling (mentioned in this study as indicators of organisational belonging).

In developing countries, ERP systems still play a major role in running many organisations. However, the latest developments in IT and computing, and their approaches to development and implementation are not so popular. It may be rare to implement enterprise systems in some parts of the developed world, which relies on new technologies or innovative methods of creating organisational change. The use of the latest methods and technologies for organisational change, aside from ERP in developing countries have not been tested sufficiently in research and practice, due to a lack of adopting such processes to promote organisational change in the public or private sector.

Future research might focus on recognising the factors described herein in more detail, and employing different methods, such as surveys or observation, as this would benefit IS research. Moreover, a study of these factors in organisations other than universities, such as private institutions, might evaluate the similarities and differences between the sectors that would enhance the understanding of the field.

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