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Offshoring ERP Implementations: Critical Success Factors in Swiss Perspective

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ABSTRACT

Enterprise Resource Planning (ERP) applications are changing the way businesses are run. IT Offshoring is changing the way IT Organizations are run. However, both ERP implementations and IT offshoring are fraught with risks. When both ERP implementation and IT offshoring happen together, the risks get even more pronounced. The paper presents the critical success factors of offshoring ERP implementation which are common in ERP as well as in offshoring case. The study is carried out with the sample interviews conducted in Switzerland. The findings reveal that eight factors are critical while considering offshoring ERP implementation, namely customer interaction skills, business process skills, ERP package skills, scalability, language, project management, choice of work to be offshored, personnel split between onsite/offshore are. We used semi-structured open ended interviews with interpretive analysis for identifying the factors.

Keywords (Required)

Enterprise Resource Planning, Implementations, Offshoring, Switzerland, Critical Success Factors

INTRODUCTION

ERP systems integrate internal and external processes, information across organization and serve the enterprise stakeholders need. Their purpose is to facilitate the flow of information between all business functions inside the boundaries of the organization and manage the connections to outside stakeholders. ERP applications have been around for quite some time and still generate a lot of interest as they bring concomitant operational efficiencies, better decision making and a platform for business innovation. However even after decades of being around, ERP implementations are still fraught with risks and failures. Against the backdrop of this, while on one side ERP applications were changing the way businesses are run, concurrently offshoring of IT services was also picking up and changing the way IT organizations are run. IT services were getting offshored and the value chain that delivered IT services was getting transformed and global. Offshoring has tremendous benefits and hence has become an industry changer. However, offshoring is also apprehensive with risks and uncertainties. Against this background, there are organizations that are trying to marry ERP implementations and offshoring. This opens up immense possibilities of gains but at the same time risks get compounded as both ERP implementations and offshoring are fraught with uncertainties. Various studies were carried out on critical success factors of ERP implementation and various studies conducted on critical success factors of offshoring separately. This paper is the common critical success factors in offshoring and ERP implementation both together as shown in "Figure 1". It is in this context that this study has been conducted on critical success factors for offshoring of ERP implementations with the geography as Switzerland.

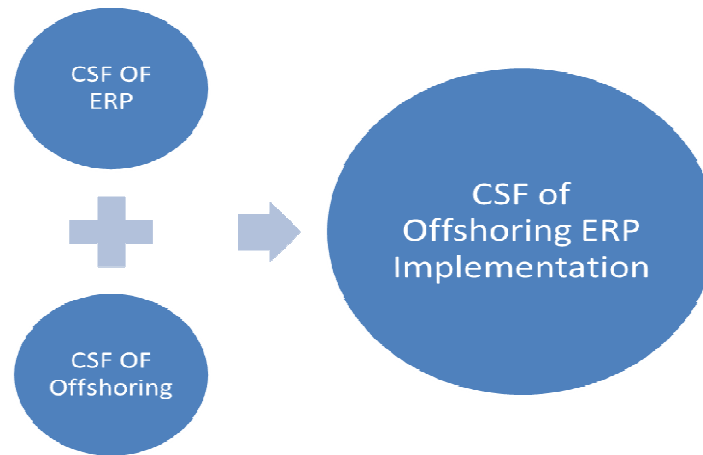


Figure 1: Concept Map

LITERATURE REVIEW

ERP has evolved over the years into its present shape and scale. The journey started with manufacturing industries as applications for inventory control. As the requirements grew it evolved into material requirements planning (MRP), then into MRP II i.e. Manufacturing Resources Planning (Kumar and Hillegrersberg, 2000). The next step for evolution was late 1980's when enterprise resource planning applications into being. Today, these applications have evolved into complex and big ERP applications that not only have an inward focus inside the organization but also an outward focus on the partner organizations that form a part of the overall business ecology. ERP applications can be defined as business application packages that can be configured to seamlessly integrate the business processes of an organization across the various functions of a business. ERP is a largely pre built , configurable platform that can be used by the organization to run and integrate all its functions like production, purchasing, sales, logistics, finance, human resources etc. It has been said in various studies that ERP packages are complex to implement. The failure rates are high and not many organizations are able to deploy them successfully. Various studies have been conducted and though the exact percentage might differ but almost fifty per cent of ERP implementations do not deliver the results expected from them. In the Gioia (2002) Survey, 51 per cent viewed their ERP implementations as unsuccessful. The Conference Board Survey interviewed executives in 117 companies that attempted ERP implementations and 40 per cent of the projects failed to achieve their business case within one year of going live (Cooke et al, 2001).

ERP applications bring along not only the benefits of integration, operational efficiencies, better decisions but also gives organizations an opportunity to relook, innovate and transform their business process. ERP systems are expected to reduce costs by improving efficiencies through computerization and enhance decision-making by providing accurate and timely enterprise-wide information (Poston and Grabski, 2001). They reflect an innovative business strategy, as ERP adoption involves business process improvement, best practices implementation, intra enterprise integration and inter-enterprise coupling (Hunton et al., 2003). The lure of these benefits is such that more and more organizations are leaving custom built applications and going for readymade and configurable ERP Applications.

Given the challenges and failures in ERP implementations, critical success factors for ERP implementations have been an object of research over the decades. Early research on ERP implementations looked upon the critical success factors from the perspective of their being Strategic or Tactical (Holland and Light, 1999). Study has also been done to find out the critical success factors that are more relevant to ERP Projects as compared to a regular IT project or a general project. In this study it was found that for ERP projects critical success factors are cultural and business changes, managing consultants, managing conflicts and staff retention (Skok and Legge, 2002). Some of the studies have specifically focused on singular dimensions of critical success factors like importance of change management in ERP implementation (Yasir et al., 2000) and expound on how change management is the crux. After ERP implementation is over, there comes a phase of post implementation period and studies have specifically focused on the same (Ifinedo et al, 2010; Zhu et. al., 2010). Likewise, there are critical success factors specifically done for ERP upgrades (Olson and Zhao, 2007). Geography centric researches have been done to capture the impact of local factors. For ERP implementations in China, critical success factors were identified explicitly (Guang-hui et al, 2006; Zhang et al, 2003). Likewise, there have been similar studies done for ERP implementations in Mexico (Sanchez and Perez-bernal, 2007) and India (Upadhyay and Dan, 2009). Further studies of critical success factors have been done against a

backdrop of classical management theory as well (Bradley, 2008). Over the years for ERP implementations various dimensions like the Barriers (Peng and Nunes, 2010), organization structures (Gallagher and Gallagher, 2010), quality issues (Kumar et al, 2009), communication effects (Yuying and Yanan, 2009), consultant selection (Tsai et al, 2009 a), software selection (Tsai et al, 2009 b), leadership (Shao et al, 2009), planning and control (Tsai et al, 2009 c) etc. have been the object of research. In all these studies there is a bevy of critical success factors that come into play starting from top management support, goal, objective, vision, user knowledge and training, project management to inter departmental conflicts etc. (Upadhyay and Dan, 2008; Jing and Qiu, 2007; Song et al, 2007; Chou and Chang, 2008; Chen et al, 2009; Baharum et al, 2009; Zhang; 2009).

While on one side there were these above mentioned ERP applications that were changing the way businesses were being run, concurrently offshoring of IT services was also picking up and was changing the way IT organizations are run (Davis and Emdor, 2006). IT services were getting offshored and the value chain that delivered services got transformed (Giao and Olivera jr., 2008). Given the advantages of offshoring, there have been a studies undertaken that have helped develop frameworks and models around offshoring (Soliman, 2003; Tate and Ellram, 2009; Youngdahl and Ramaswamy, 2008), viewpoints on the role of trust in outsourcing (Antoine, 2007), the mindset changes needed (Aydin et al, 2010) and very detailed studies that help understand offshoring better (Jensen, 2009; Chadee and Raman, 2009; Gonzalez et al, 2006; Stratman, 2008). There are advantages of offshoring but there are the concomitant issues (King, 2008), risks, co-ordination problems (Mirani, 2007) as well. Offshoring is a decision that will be taken by the senior management, but the middle management that has to make it happen will not share the same vision and enthusiasm and can jeopardize offshoring (Lacity and Rottman, 2009). Offshoring is fraught with uncertainty (Clott, 2009). To increase control, some organizations try taking the middle path where offshoring is done but not outsourcing (Preston, 2004; Lampel and Bhalla, 2008). In offshoring, there could be factors like culture, time zone, knowledge, language, infrastructure, offshoring backlash etc. that could jeopardize offshoring (Lacity et al, 2009; Gregory et al, 2009). So it can be aptly concluded that both ERP and offshoring are two seminal trends and their importance cannot be undermined. There are organizations that are trying to marry ERP implementations and offshoring. This opens up immense possibilities of gains but at the same time risks get compounded as both ERP implementations and offshoring are fraught with uncertainties. It is in this context that this study has been conducted on critical success factors for offshoring of ERP Implementations.

The comprehensive review of the literature put some light on common critical success factors in ERP implementation and offshoring that are valid across industries and across countries. It does provide some pros and cons. The research findings are based on Switzerland.

RESEARCH APPROACH

This study takes a qualitative and exploratory approach that entails in-depth, semi structured interviews with “ERP and offshoring experts” to stimulate the success factors in offshoring of ERP implementations. These “ERP and offshoring experts” were ERP program managers who had played a key leadership role in ERP implementations involving Offshoring. Twelve such ERP and offshoring experts were interviewed as a part of this study. Since the scope of study is Switzerland and India is the prominent offshoring location hence the country scope has been restricted to ERP implementations in Switzerland, with the offshoring location being India. Further given the prominence of “offshored outsourced” scenarios vis-a-vis “offshored insourced” scenarios, scope has been restricted to “offshored outsourced” scenarios and not “offshored insourced” scenarios. Lastly, ERP is a generic name that sometimes gets loosely defined to include small business packages as well. Hence the scope of study has been restricted to include the traditional ERP offerings from the stable of SAP and Oracle. These two companies are the major ERP players and between them control more than 50 per cent of the market.

The questions were open-ended and followed a flow which started with “introductory questions” to introduce the objective of study, and also the background of the interviewer and interviewee. This was followed by the “transition questions” which moved the interview into the broad scope of study. Next were the “key questions” that drove deep into details and elicited insights and perspectives. Finally it was the “ending questions” which were used to bring closure to the discussion and also to summarize.

Semi structured interviews were recorded. Subsequently the recordings were analyzed and researcher coded the data. Further the coded data was analyzed and summarized to elicit the critical success factors/themes from each interview. Lastly the critical success factors/ themes of the individual interviews were compared and each factor/theme was weighed by counting the number of respondents who expressed the same or similar factors / themes.

To ensure reliability and validity of the findings from interviews, the interviewees were encouraged to compare the interview findings with documents from the Organization (monthly status reports, quality gate reports, steering committee minutes etc.). Likewise member checking was done where results from qualitative study were returned to the participants for verification. Also in the entire process of research, an independent ERP expert was involved to review the process and output

of the study. The duration of each interview was to the tune of an hour. There was an additional follow up round of interview which used to typically last half an hour where interviewees were presented the outcome of the interview.

RESEARCH FINDINGS

The critical success factors have come out well and capture a broad spectrum. Some of the success factors are Soft factors like customer interaction skills, cultural compatibility and language. Some of the factors are around conventional hard skills like business process skills, ERP package skills and project management. There are macro factors like scalability of vendors and likewise micro factors like choice of work to be offshored and personnel split between onsite and offshore. The full list of factors that came out prominently as a consequence of the in depth and semi structured interviews is given below.

- Customer Interaction Skills
- Business Process Skills
- ERP Package Skills
- Scalability
- Language
- Project Management
- Choice of Work to be Offshored
- Personnel Split Between Onsite/Offshore

Customer Interaction Skills

These skills came out prominently as a key factor in the interviews that were conducted. More so because in an onsite: offshore model, communication with clients at onsite happens both in person as well as in remote mode. In case of remote communication between clients at onsite and offshore, the ability to communicate, articulate and interact with the client becomes very important. What also impacts this factor is the investment that the organizations are willing to make in communication infrastructure like teleconferences, video conferences and various other collaboration tools.

Business Process Knowledge

The reason why this was identified as one of the critical success factors was that in all the interviews, need for offshore to talk business language came to the fore. Since it was technical work that was getting offshored, the offshore personnel were mostly technical (and not so much functional) whereas when the requirements were coming from client / onsite, it was from personnel who understood business / functional better and hence were uncomfortable with technical language. Further even when the vendor personnel had business process knowledge, it had to be grounded in the context of local statutory laws and rules.

ERP Package Skills

This is the ERP package skills of the vendor team - both at onsite as well as offshore. The ERP package skills at offshore can be lacking on occasions. Offshore normally is an entity that is hidden from client / onsite. In person interaction seldom happens. So to that extent while the vendor personnel getting deputed to onsite are strong in ERP skills as they have to take up customer facing roles at onsite, it is the not so skilled personnel who get staffed at offshore. And the perception is that vendors have a tendency to put weak personnel at offshore. Thus the quality of offshore deliverables gets disputed at times.

Scalability

The vendors should have the ability to increase the number of personnel and introduce new skills at short notices. One of the reasons why customers are going in for outsourcing is that customers themselves cannot run a full-fledged ERP practice and hence scalability is an expectation from vendors. This factor is a challenge because though vendors have large number of personnel but since the vendors service an ever growing number of clients, hence a particular client focus never comes up and this results in a slow ramp up. Some interviewees were of the opinion that to get the right priority from vendor it is important to have a CXO connect in the vendor organization. Further there are two aspects of scalability – onsite and offshore, the former being especially challenging. Onsite scalability is the capability of the vendor to supply and deploy personnel at onsite at short notices with the right visas / work permits. The ability of a vendor to get the right work permits for its personnel is important. India is the prominent offshore location and most of the personnel are Indian passport holders. Indian passport holders need to go through elaborate visa procedures for most of the countries unlike personnel from western countries. So lead time involved becomes more. Further in case of Switzerland the work permits are issued for a canton within Switzerland and if the vendor personnel sent onsite has to change the canton, elaborate work permit transfer procedures have to be taken

up. Also if the vendor personnel have to stay for periods longer than two years in Switzerland the nature of work permits changes. And many times the number of work permits being allowed in canton could be a restrictive number. On account of these additional complications, the onsite scalability of offshoring vendors based in India gets restricted and impacts offshoring of ERP implementations.

Language

Prominent offshoring location is India and personnel of offshoring vendors based in India have a fair fluency in English but not for languages spoken in Switzerland. The requirement for vernacular is important to succeed in Switzerland. The problem gets more compounded as Switzerland is a country of multiple languages. Cultural compatibility also came up as one of the factors but as the study delved deep, it was evident that since language is a big part of culture so if language is taken care of, cultural compatibility gets taken care of to a very large extent.

Project Management

While project management is a must for any successful project, in case of offshored ERP implementations there is an extra project management overhead as work has to be split, sent to offshore, monitored, and delivered from offshore. This calls for a dedicated focus on project management to ensure that offshoring activities dovetail into the larger ERP implementation Project Plan. Since offshoring means work will happen remotely, so that brings in additional complications and makes project management more complex. In the study what also came to the fore was that offshoring vendors based in India were more oriented towards PMP framework as compared to Prince2 framework. However in Switzerland, just like rest of Europe, Prince2 methodologies are also prevalent.

Choice of Work to be Offshored

A unanimous choice amongst all the interviewees was that prudence and discretion had to be exercised at the time of deciding what has to be offshored. It was felt by interviewees that it is easier to offshore technical (programming related) work as compared to functional work. Another way of looking at this is that requirement elicitation is best done onsite whereas the downstream work in terms of technical design, coding / configuration, unit testing is best done offshore before the works again gets pushed to onsite for integration testing, user acceptance testing, cutover and go live activities. Some interviewees paraphrased this as business blueprinting, cut over and go live being done onsite whereas realization was done mostly offshore.

Personnel Split Between Onsite-Offshore

The right split of personnel between onsite and offshore plays a key role in success of ERP offshoring. Over offshoring can make the entire program extremely risky. A very heavy onsite can lead to erosion of benefits of outsourcing. For successful offshoring a healthy but lean onsite presence of personnel is required at onsite who can co-ordinate and route requirements and artefacts between client and the offshore team. Likewise onsite also provides same time zone response and doubles as a quick response team. So compromising with onsite staffing beyond a certain level is not advisable in the interest of the success of ERP implementation offshoring.

CONCLUSION

The critical success factors have come out well and capture a broad spectrum ranging from soft skill factors to hard skill factors and likewise from macro factors to micro factors. The Soft skill factors are Customer Interaction Skills, Cultural Compatibility and Language and the hard skill factors are Business Process Skills, ERP Package Skills and Project Management. Further there are macro factors like Scalability of the offshoring vendors at one end and micro factors like Choice of Work to be Offshored and Personnel Split between Onsite and Offshore at the other end.

At the same time factors like infrastructure, connectivity links etc. though are important but did not get a mention as everyone unanimously felt that given the advancements in communication technologies and infrastructure this is no longer a risk.

Also it came to the fore that within Switzerland the language plays an important role. Language is one of the primary reasons why countries in Eastern Europe are coming up as outsourcing locations.

This study has concluded well but there lies scope for future research. The research has potential to be extrapolated to other Geographies namely Americas, Asia etc. There could be different outcomes that would help in a more broad based critical success factors. Likewise the above is a qualitative study and there is room for taking up a downstream quantitative study which can validate and extend the qualitative study undertaken so far.

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