Proceeding of the 2nd Informatics Conference 2016 (ICF-2016) June 18, 2016, at Universitas Budi Luhur, Jakarta, Indonesia, Editor: Setyawan Widyarto, ISSN: 2477-5894

Enterprise Resource Planning (ERP): CSFs in SAP System towards the Multinational Companies

Thevarani Shanmugam, Rajeswary Muthu Kathan, and and Setyawan Widyarto, *Founder*, *ICF*

Abstract **- This paper investigate the authoritative critical success factors (CSFs) which are essential for implementing the enterprise resources planning (ERP) systems focus on SAP system in multinational companies especially in Malaysia. ERP is a business process management software that allows an organization to use a system integrated application to manage the business and automated many back office function related to technology services. ERP is a package with the techniques and concepts for the integrated management of business as a whole, for effective use of management resources, to improve the efficiency of an enterprise. Initially, ERP was targeted for manufacturing industry mainly for planning and managing core business like production and financial market. As the growth and merits of ERP package ERP software is designed for basic process of a company from manufacturing to small shops with a target of integrating information across the company.**

Keywords : Benefits, CSF, Enterprise resource planning system, ERP , SAP

I. INTRODUCTION

In the 1990's enterprise resource planning (ERP) system planned a process on a business management paradigm. ERP entails gaining knowledge of best business practices and applying these to improve or completely replace existing legacy practices. The implementation projects of ERP in the 1990's and early 2000's faced challenges such as shortages of experienced project managers and consultant and limited support capability. Today, experienced manager and consultant a bound and implementation support protocols are well developed. There are few types of ERP systems. Those are SAP, BAAN , JD Edwards, Oracle Financials, Siebel and PeopleSoft. Among all the ERPs , SAP system has a number of advantages .

Thevarani Shanmugam is with Faculty of Computer Science and Information Technology, University Selangor, Selangor, Malaysia.

Rajeswary Muthu Kathan is with Centre for Foundation and General Studies University Selangor, Selangor Malaysia.

Setyawan Widyarto is with Faculty of Computer Science and Information Technology, University Selangor, Selangor, Malaysia.(e-mail: swidyarto@unisel.edu.my).

II. IMPORTANCE OF THIS TOPIC

Upon investigating the key ERP of SAP benefits is important for a number of reasons. First determining the benefits that some multinational companies have experienced from implementing an ERP system especially SAP , provides other companies with a basis of determining if and how ERP system will solve their problems. Determining benefits allows firms to investigate the alignment between their needs and what an ERP system can do. Secondly, establishing ERP benefits provides a basis for setting expectation for other ERP implementations. Establishing ERP benefits for one company provides a benchmark for other company's ERP implementation. Third, once we understand what ERP benefits are likely to be experienced, then those potential benefits can be used as a basis to set up measurement for those benefits. Then those measures can be establish whether a company has attained what they expected they would from an ERP implementation. Fourth, a critical issue is the extent to which different industries experience or should expect different benefits.

III. SIGNIFICANCE OF STUDY

To discover the critical success factors that lead to the success of ERP in International Companies especially in Malaysia. The outcomes from the results provide valuable insights for the researchers and practitioners are interested in implementing Enterprise Resource Planning systems, how efficient they can utilize their limited resources and to pay adequate attention to those factors that are most likely to have an impact upon the implementation of the ERP system. ERP systems provide firms with two new and different types of functionality, a transaction processing function, allowing for the integrated management of data throughout the entire company, and a workflow management function controlling the numerous process flows within the company. ERP facilitates the flow of information between all the processes

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in an organization. ERP systems can also be an instrument for transforming functional organizations into process-oriented ones. When properly integrated, ERP supports process-oriented businesses effectively.

IV. OBJECTIVE OF THE STUDY

The Implementation of new technologies and manufacturing philosophies in industrial sector with good success rates is crucial in a nation's economic growth and prosperity. ERP is one such system for which a lot of resistance is offered in organizations for implementation due to higher investments and more failures associated with it. The study of ERP implementation issues is necessary to encourage and persuade small and medium scale industries to go for ERP implementation as ERP is vital in their future growth. The objective of this paper is identified and validates the critical success factors for ensuring successful implementation of Enterprise Resource Planning (ERP) packages in companies.

- To investigate the Implementation of ERP and IT industries in Malaysia.
- To identify the critical success factor &challenges in ERP Implementation.

V. THE IMPORTANCE OF ERP SYSTEMS FOR COMPANIES

Knowingly or unknowingly, every business with ERP system implementation is expected to have mammoth benefits such as increased productivity, reduced operating costs, and flow of information, and improved performance management.

The accomplishment of the ERP system is not only of interest to researchers in the field information technology, but also for all researchers in economic disciplines. ERP system uses the 'development life cycle' as a conceptual reference in software engineering environment. Implementation teams are guided through persons who are responsible for the business processes, not IT technology. In addition, the ERP imposed by that logic companies that are the focus of employees who hold business processes. An ERP implementation will force the employees as member's implementation team to intensively think about business processes as well as their changes.

In the course of evaluating the impact of ERP implementation on business processes and company, many researchers have made their generic models. The main purpose of each model was to investigate the influence of several aspects of ERP implementation and later ERP production at the company's performance and the performance of business process. In some models, it was found that it was longer implementation, the overall performance of the company increases, but the performance business processes remain the same. One explanation for the absence of a positive impact the company's performance in the short term is that the cost of implementing ERP investments tends to exceed the short-term and medium-term increase in productivity.
It was found that companies that have implemented ERP for many years do not contribute to the improvement of business processes in relation to companies with short ERP history.

Thus, ERP customers in the short and long term do not achieve high performance of business processes and do not achieve high overall performance company. The learning curve suggests that companies need much more to recover from the initial shock of ERP implementation than planned.

Because of the research states that ERP extensions with additional functionalities and solutions for business processes have a positive impact on organizational performance and the improvement of business processes.

Before designers of ERP, systems have been striving to satisfy the requirements of both operational and managerial users. Much debate has centered on the ability of ERP to satisfy both the operational requirements for managing basic resources and the managerial requirements for planning and control of these activities. 1965 Anthony developed taxonomy of managerial activity to help to differentiate the types of support possible from information systems. Allowing that the limits between these categories are not exact, he defined that managerial activity consists of:

- strategic planning
- management control
- operational control.

The characteristics of the information required by these three categories of activities are different from each other. Operational control activities require information that is detailed and real-time. It is based on the actual use of internal resources. Managerial control requires more information, which are not necessarily in real-time.

The framework for management information systems proposed by Gorry & Scott Morton (1971) is very applicable to today's situation, where contribute of ERP systems has been clearly to support all types of management activity. Management control should stem from mastery of the detail

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contained in operational systems, Gorry & Scott Morton would argue that these are two levels of activity, which have different information characteristics and requirements. The databases as a support management and strategic decisions would be quite different to those used in operational control. Figure 1 shows the main advantages of SAP :-

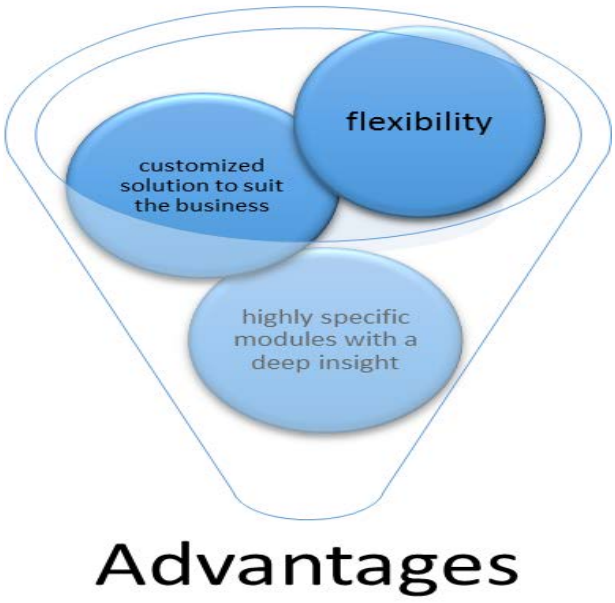

Fig. 1. The main advantages of SAP

Most people are realizing that SAP solutions have become extremely important to such businesses as international businesses. This is due to the companies that are part of the fortune 1000 as they have the ERP solutions in place and they get those from the SAP. It is an acronym for systems, applications and products in data processing. So what exactly are the benefits of using ERP and SAP enhancement packages? It is becoming known by most all companies that they really do need to have these ERP and SAP enhancement services in order for things to run smoothly. If you get an enhancement package in place, you can expect to have your systems more flexible where third party applications are concerned. ERP does this by committing to different business scenarios so that they can improve the practices of the business networks.

Some companies find that they have problems with their end-to-end processes. That is where you can implement SAP ERP to sharpen your core function with the end-to-end process. It is safe to say that businesses really do need to have an enhancement package in place in order to be able to do what they need to do. It will help them to automate their enterprise and they will be able to keep their operational processes up to date with the ever-growing industry. It is said that SAP can help to execute ERP solutions in over 25 areas of industry. That is quite an accomplishment. It is also said that SAP will be very popular in helping companies in such places as Africa and Asia. SAP ERP is round the world in more than 85 countries, which turns out to be more than 43,000 clients worldwide. Those numbers are expected to grow as more and more enterprises jump on the SAP ERP bandwagon. Companies love the fact that they get real time updated information so they can keep their edge and stay ahead of the game.

There are many types of businesses that benefit from implementing SAP ERP solutions. If you feel that you can benefit from implementing SAP ERP solutions, then you need to check out what it can do for you. The best thing that you can do for your company is to make an educated decision. Knowledge is power and power is knowledge. Talk with your IT department to see what your options are and where you need the most help. SAP ERP can help you to keep your network as it should be. You want to make sure that you are doing what is best for your business and this will help you make is solid and safe

VI. DATA COLLECTION

The collection and organization of data are an integral and critical part of the research process. The discussion covers data acquisition, its importance to research, management of data, and data management plans and tools. Thus, the data collection objectives are :

1. Define data and discuss the different types of data
2. Learn the importance of data and the importance of maintaining data quality

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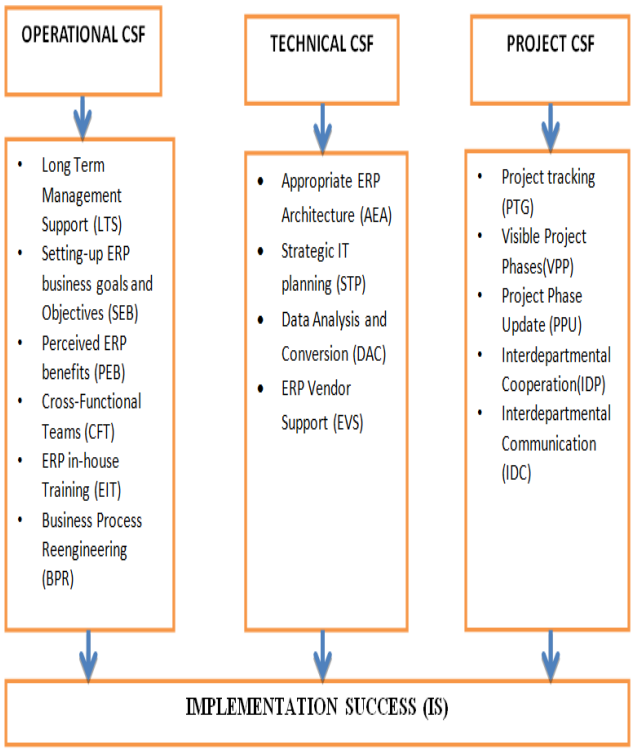
Figure 1 shows, all the journals compared and extracted the points based on it.

Fig.1 Compared and extracted points of the journals papers

This study used Factor analysis method to determine which factors are critically important and expected for the implementation of ERP projects. Furthermore, the factor analysis method determines the most important factors under the domains' namely organizational, technical and project related. If the values are greater than 0.9, then it is the most important factor as suggested by (*C. Annamalai,, 2014).* Three academic experts and two senior industry executives in India were identified for pilot study to assess the suitability of the instrument items based on the selected source. The final version of the questionnaire was posted on the Blog based on their recommendations uploaded in an URL (http://erpphd.blogspot.com/). This Blog's address had been sent to 1269 manufacturing organizations. Through the member directory email list of Charted Institute of Logistics and Transport (CILT) India, the data was collected. After numerous reminders sent, the data was received from *223* respondents (20.82%) and adopted to analyze the data. Diagram below shows the research framework.



VII. RESEARCH QUESTIONS AND THE HYPOTHESES

RQ: How many CSFs are important under the domain of organizational, technical and project to lead the successful implementation of ERP projects in the company?
Based on operational CSFs discussed in the literature review, the following six hypotheses were formulated:

H1: LTS is important and certainly related to implementation success (IS).

H2: SEB is important and certainly related to implementation success (IS).

H3: PEB is important and certainly related to implementation success (IS).

H4: CFT is important and certainly related to implementation success (IS).

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H5: EIT is critically important and certainly related to implementation success (IS).

H6: BPR is important

VIII. RESULTS AND DISCUSSIONS

The software is chosen to analyse the results. Table 1 presents the factor loading of CSFs in the organization.

TABLE I
THE FACTOR LOADING OF CSFS IN THE ORGANIZATION

Items	***Factor Loading***	***Hypothesis***
Long-Term Management Support (LTS)	**0.926****	**H1: Supported**
Setting-up ERP business goals and Objectives (SEB)	0.889	H2: not supported
Perceived ERP benefits (PEB)	0.788	H3: not supported
Cross-Functional Teams (CFT)	**0.912****	**H4: Supported**
ERP in-house Training (EIT)	0.772	H5: not supported
Business Process Reengineering (BPR)	**0.919****	**H6: Supported**

IX. CONCLUSION AND FUTURE WORK

SAP is one of the number one providers of business software solutions towards better work and data management in organizations across industries. When Systems, Applications & Products in Data Processing (SAP) was founded in June, 1972, it was centered to only a type or big businesses. However over a period of time, small and medium size companies adopted SAP towards achieving organizational goals and today SAP is the leader in enterprise applications. In the future, companies that consider an ERP system will see it as a strategic opportunity to strengthen their competitiveness, an instrument to improve the company's process flows. The new services that the consulting firm will have to deliver in order to be competitive in the future are, management consulting skills, specific industry knowledge.

ACKNOWLEDGEMENT

We would like to thank academicians from Informatics and Computing Forum (ICF) for their continuous support and guidance throughout this research and publication exercise.

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Thevarani Shanmugham was in born in, Selangor, Malaysia in 1992. She received her first Degree in Bachelor of Computer Science from University Selangor (UNISEL) in 2014. Year 2015, started to do Mater in Information Technology. She is a Database Administrator (DBA) since 2014, and working in DHL IT Services. She has interested in ERP methodology and also in Project Management field.

Rajeswaray Muthu Kathan was born in Selangor, Malaysia in 1983. She received her first degree from Binary University Malaysia (*twinning program with University of Sunderland)* in 2008. She is a Master in IT student affiliated with the Faculty of Computer Science and Information Technology, University Selangor. In 2009, she joined SJK(T) Simpang Lima, Klang as a teacher. She did her KPLI-KDC teacher training course and persuaded Diploma in Teaching, Jun 2012 from Maktab Perguruan Tuanku Bainun. Her interest in research includes e-learning, software development, mobile and web application.

Setyawan Widyarto was born in Purwokerto, Central Java, Indonesia in 1963. He received first degree from IPB Bogor in 1986 and M.Sc. degrees in Manufacturing System Engineering and Management from University of Bradford (UK) under Chevening Awards (British Council) in 1998. In 2008 he finished his Ph.D. degree in Computer Science from University Teknologi Malaysia. In 2008, he joined Universiti Selangor (Unisel). Since 2012, he has been an Associate Professor with the Computer Science Department (Industrial Computing), Unisel Bestari Jaya, Kuala Selangor. His research interest includes (agile) software engineering, virtual environment/reality and image processing. He is an editor member of some journals.