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A STUDY ON ERP SOFTWARE RELATED TO MANUFACTURING INDUSTRY

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ABSTRACT

There are various problems associated with manufacturing industries. Some of the problem are non-availability of highly skilled labor at affordable costs, absence of adequate knowledge, technology, low production capacity, ineffective marketing strategy, constraints on modernization & expansions, identification of new markets etc., It can be overcome by implementing powerful IT solution like ERP which offers multiple benefits to face global competition. Aim of the study is about ERP software related to manufacturing industry. The study used SPSS analytical tools such as Chisquare analysis, weighted average method. This tool is used and found how the employees facing challenges and satisfaction level of the software. Based on the respondents we have to analyse the problem in ERP software related to manufacturing industries.

Keywords: ERP, Manufacturing Industries, Employees, Technology.

INTRODUCTION

Enterprise resource planning (ERP) system is a business management system that comprises integrated sets of comprehensive software, which can be used, when successfully implemented, to manage and integrate all the business functions within an organization. These sets usually include a set of mature business applications and tools for financial and cost accounting, sales and distribution, materials management, human resource, production planning and computer integrated manufacturing, supply chain, and customer information.

These packages have the ability to facilitate the flow of information between all supply chain processes (internal and external) in an organization. Furthermore, an ERP system can be used as a tool to help improve the performance level of a supply chain network by helping to reduce cycle times. It has traditionally been applied in capital-intensive industries such as manufacturing, construction, aerospace and defense.

REVIEW OF LITERATURE

Gibson, (1999), ERP system integrates all business process and functions enabling organizations to improve efficiency. Davenport (1998) states that, “the business world’s embrace of enterprise systems may in fact be the most important development in the corporate use of information technology in the 1990s.” However, ERP’s contributions to organizations strategic value creation efforts depend on many critical factors including its right implementation and the effective management of its operational performance during its lifecycle.

Jacobs, Bendoly (2003), In this research paper there is a considerable volume of research focused on the specific issues of ERP; however, there are no consensus on the definition and the issues related to ERP. According to, “Enterprise resource planning (ERP) has come to mean many things over last several decades. Divergent applications by practitioners and academics, as well as by researchers in alternative fields of studies, has allowed for considerable proliferation on the topic and for a considerable confusion regarding the meaning of the term.”

Johansson (2011), The primary focus of the relationship between factors influencing selection of implementation approach and companies ability to stay within budget when implementing ERPs. The main findings are that the number of implemented modules influences selection of an implementation approach, companies with information strategies are more likely to stay within budget regarding ERP systems implementation.

Gable and Rosemann (1999), A survey of the literature on ERP and its implementation, operational performance, and other issues related to its lifecycle. This study provides a survey of literature on ERP published in the major information systems, related journals, and conference proceedings during the period 1997–2010. It categorizes them through an ERP life cyclebased framework that is structured in phases. Originally, this bibliography started as an extension of the one developed by, which focused on ERP and measurements of ERP.

Akkermans HA, Bogerd P, Yucesan E, (2003), The term Enterprise Resource Planning is originally coined in 1990 by The Gartner Group to describe the next generation of MRP II software. Historically, ERP evolved from material requirement planning (MRP) and manufacturing resource planning MRP II systems of the 1970s and the 1980s, respectively. MRP and MRP II systems were designed to

systemically link different aspects of process information within specific business context such as manufacturing. Within the literature, different authors have defined ERP in a different way.

Boersma K, Kingma S, (2005), They can change the business process to accommodate the system, which may mean deep changes in long-established ways of doing business and reorganize important people's roles and responsibilities. However, any redesign and changes of a business process that the system planned to support should not be carried out with the intent of supporting the planned system.

OBJECTIVES OF THE STUDY

- To study on importance of ERP implementation in manufacturing industry.
- To analyze about the employee awareness and opinion on ERP system.
- To study on impact, various advantages and benefits of ERP system.
- To measure the satisfaction level of employees on benefits of ERP system.

RESEARCH METHODOLOGY

Descriptive research design is used for the study. It includes questionnaire for collection of data through field study, collecting data from target respondents, processing and analyzing the data and arriving at conclusions. It includes sampling design, sample location, sampling frame, sampling unit and sample size. The population of the study will be employees of various manufacturing industry in Chennai having knowledge about ERP software. The response are taken by questionnaire from 120 respondents. Findings and interpretation of the response are analysed by percentage analysis, weighted average method, Chi-square analysis.

RESULT AND DISCUSSION

CHI-SQUARE ANALYSIS

Chi-square analysis of respondents working department and management provide special training program about ERP

Ho – There is no relationship between respondents working department and management provide special training program about ERP.

Ha – There is relationship between respondents working department and management provide special training program about ERP.

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.696 ^a	16	.621
Likelihood Ratio	15.034	16	.522
Linear-by-Linear Association	2.965	1	.085
N of Valid Cases	120		

(80.0%) have expected count less than 5. The minimum count is 1.17.

Inference

The P value is .621 which is greater than .05. So, Ho is accepted. There is no relationship between respondents working department and management provide special training program about ERP.

WEIGHTED AVERAGE METHOD

Table 4.2.2 – Table Showing Weighted average method on Satisfaction of ERP

	Highly Satisfied (5)	Satisfied (4)	Neither Satisfied nor Dissatisfied (3)	Dissatisfied (2)	Highly Dissatisfied (1)	$\sum X_i W_i$	$\frac{\sum X_i W_i}{15}$	RANK
ERP results to productivity Improvement	455	96	6	6	0	563	37.53333	1
Order management Improvement	105	208	90	28	3	434	28.93333	4
Overall cost reduction	120	160	108	30	5	423	28.2	5
Profit Improvement	180	216	45	20	5	466	31.06667	3
Transportation/Logistics cost reduction	260	164	30	20	7	481	32.06667	2

$$W = \frac{\sum X_i * W_i}{\sum W_i}$$

$$\sum W_i = 5 + 4 + 3 + 2 + 1 = 15$$

Inference

From the weighted average method, it is found that ERP results to productivity Improvement.

SUGGESTIONS

- The success of the system is fully dependent on how the employees utilize it. The management should provide special training to employee's about ERP system.
- All the employees should known about success and failure of ERP system. The management should consider about the changes need in current ERP system



CONCLUSION

ERP systems put in place a disciplined way of working and provide better visibility to the working of the organization. In developing countries, SMEs are the backbone of the economy and today they faced global competition. It is found that there are number of powerful advantages of Enterprise Resource Planning. It has been used to solve a number of problems that have plagued organizations in the past. ERP systems have become the most common business strategy for most large companies. SMEs too are moving towards ERP systems. They need to adopt a proactive approach towards ERP and consider it as a business solution rather than a mere IT solution. Though the ERP market is growing and ERP vendors have shifted their focus to the SME segment, there are several issues to be resolved.

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