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TOGETHER WE REACH THE GOAL





# An Empirical Study On Problems Of ERP Implemetation In Software Industry With Reference to Pune City

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**Abstract** — ERP implementation causes enormous change that needs to be carefully managed to avail benefits of ERP in Software Industry. To bring ERP into practice in any industry takes very long time with large investment of cost. Even though ERP has had positive influence in every industry, some of the industries came with success whereas some got failure in ERP implementation. This paper investigates problems faced by the end users and Top Management people in ERP implementation process in software industry with reference to Pune City.

**Keywords**—ERP, ERP implementation, Software Industry.

## I. INTRODUCTION

Managing future means managing large amount of information. In order to manage information, in order to deliver high quality information to the different decision makers at right time ERP plays very important role in industry. Almost all organizations are turning to some sort of Enterprise Resource Planning. ERP combines several traditional management tasks and functions into a logically integrated system and helps to flow all relevant information across these functions. ERP is designed to model and automate basic processes across the organization over a centralized database and eliminates the need of disparate systems maintained by various units of the organization. ERP implementation is a strategic decision, involving significant resources (both financial and human), proper evaluation and business process re-engineering. Implementation of ERP system is a continuous exercise, consisting many process alterations and several legacy issues. An ERP implementation helps to assess and optimize existing business processes, functions and breaking points between departments.

ERP softwares are capable of delivering productivity improvements and cost reductions. There is a misconception that ERP is implemented only in large scale industry, but the fact indicates it is implemented in small and medium industries too. Pre-evaluation screening, package evaluation, project planning phase, gap analysis, reengineering, customization, training, testing, going live, end use training and post implementation are the various phases of ERP implementation. Implementation of ERP gives success as well as failure to industries with many causes. ERP implementation helps to automate the process of data collection, collation and refinement. Selecting and implementing a right choice of well

customized ERP package helps to raise productivity and profits dramatically. But many industry fail because of incorrect selection of package, incompetent implementation and ineffective usage.

## II. LITERATURE REVIEW

The literature review is focused on various research studies that are relevant to the present study.

Philip Balsmeir and Shailesh Nagar (2008) in their research study "Implementing ERP in India – Issues and problems" focused on problem areas of Indian companies faced while implementing ERP. The researchers identified causes of lacking in ERP implementation are poor infrastructure, low level support from the government and implementation costs. They also found that work culture in India in many organizations is autocratic than participative. An atomization result into unemployment problems is one of the hurdle for ERP implementation.

W. H. Tasai, W. R. Lin, S. J. Lin, J. L. Hsu (2009) investigated effect of ERP implementation problems on ERP performance level in research study entitled "Investigation of ERP Implementation Problems in Organizational Environment" with respect to top 5000 enterprises in Taiwan. The study was based on primary data and which was analyzed through ANNOVA. The study reveals that lack of top management involvement, firm policies, wrong selection criterion for ERP applications and change management issues are the hurdles observed during ERP implementation.

Maryam Mahdavian, N. Wattanapongsakorn, M. Azadeh, A. Ayati, Mehdi Mahdavian, M. Jabbari, S. Bahadory (2012) in their research paper "Identifying main Resistance Factors in ERP Implementation: A Case Study" identified causes of resistance from people for ERP implementation. With the help of descriptive statistics, they identified 10 factors which are more affective in ERP implementation. These factors were unclear vision, weak project management, change management, lack of risk taking, information transparency, loosing autonomy, lack of confidence, complexity of system, lack of self interest and fear to lose status in market.

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**Young Mok Ha, Hyung Jun Ahn (2013)** published a research paper "Factors affecting the performance of Enterprise Resource Planning (ERP) systems in the post-implementation stage". Researchers collected opinions of ERP implementation team members and users of Korean companies about various parameters which affected on performance of ERP. Researchers observed factors that affect performance of ERP which were top management support, competency of ERP team, user training, continuous process improvement and communication.

### III. OBJECTIVES OF STUDY

1. To study various ERP models used in Software Industry.
2. To know the problems of ERP softwares while implementing the system in Software industry.

### IV. SCOPE OF STUDY

The researcher has conducted study by collecting data from software industry. The scope of the study includes study of ERP implementation models and problems of ERP softwares while implementing the system. The scope of study is confined with Multinational Software Industry in Pune city of Maharashtra state.

- Conceptual Scope:** The conceptual scope is focusing on ERP concepts, ERP modules, ERP products and ERP implementation methodology.
- Analytical Scope:** The data collected is analyzed with the help of statistical tools Excel and SPSS.

### V. SIGNIFICANCE OF STUDY

1. It will help the software industry to design the exact required ERP software solution.
2. This study will help the management people for effective implementation of ERP and take proper decisions.

### VI. RESEARCH METHODOLOGY

An empirical study was carried out using a survey method, which contains the close-ended type of questions. Some questions are based on five point Likert Scale technique.

**Sample Design:** Research was conducted in Pune District of Maharashtra State. The sample design helped the researcher to conduct the research in good way. End users such as Software Developers, Database Administrator, Project Leader, ERP consultant, Team lead and Top Management people such as CEO, CIO, Director, Project Manager were considered as Respondents for study.

### VII. DATA COLLECTION

- **Primary Data:** The researcher has used structured questionnaire to collect primary data.
- **Secondary Data:** The necessary secondary data such as concepts of ERP has been collected from sources like documents, libraries, magazines, published reports, published sources such as journals, books, articles, Research papers, library and web sites.

### VIII. DATA ANALYSIS AND INTERPRETATION

1. **Objective1:** To study various ERP models used in Software Industry

**Table No. 01 – ERP models used in Small Scale, Middle Scale and Large Scale Software Industry**

Type of Industry	SAP	Oracle	SAGE	Microsoft	People Soft	Tally ERP	Others
Small Scale	2 20%	0	0	2 20%	2 20%	2 20%	4 40%
Middle Scale	2 20%	0	2 20%	0	0	2 20%	4 40%
Large Scale	6 60%	6 60%	0	2 20%	0	0	0
Total	10	6	2	4	2	4	8

(Source: Data Compiled by Researcher)

#### Interpretation:

The above table shows that 20% of Small Scale, 20% of Middle Scale and 60% of Large Scale respondents are using SAP. 60% respondents from large scale industry are using Oracle. 20% respondents from middle scale industry are using SAGE ERP. 20% of small scale and 20% from large scale are using Microsoft ERP. 20% respondents of small scale industry are using PeopleSoft. 20% of small scale and 20% of middle scale respondents are using Tally ERP. 40% of small scale and 40% middle scale are using other ERP systems.

2. **Objective2:** To know the problems of ERP softwares while implementing the system in Software industry

The researcher classified various parameters which comes as challenges for the software industry in ERP implementation process. Prepared questionnaire consists question as ERP implementation challenges in Likert Scale technique, values ranging from 1 to 5 where (1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree). End users and top management representative were the respondents. Table No. 02 shows the problems/challenges faced by IT industry during ERP implementation process. The objective was studied with the help of mean value of each question for Likert scale.



**Table No. 02 Challenges faced by Software Industry during ERP implementation**

Challenges/Problems faced in Industry	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean
Integration of different types of data was a big problem	1	5	2	17	5	3.67
ERP system is too complex for use	2	15	1	8	4	2.90
Users not well trained to use the system	0	9	8	12	1	3.17
Vendors are very unreliable	1	8	3	16	2	3.33
Customization of ERP to organizational needs took long time	1	9	4	13	3	3.27
Improper Suggestion by Consultant for selection of ERP	2	9	6	11	2	3.07
Lack of Top management involvement	3	21	1	5	0	2.27
Actual Cost exceeds budget	2	12	5	9	2	2.90
Lacking in Business Reengineering	2	14	6	6	2	2.73
Heavy gap in requirements	3	19	1	7	0	2.40
Poor Planning	2	16	3	7	2	2.70
Underestimation of time and resources required	1	12	1	14	2	3.20
Employees resistance to change	0	5	6	16	3	3.57

(Source: Data Compiled by Researcher)

The above table depicts, with the mean score, 3.67 respondents agree that integration of different types of data was a big problem, with mean score 2.90 respondents disagree that ERP system is too complex for use, with the mean score 3.17 respondent agreed that users not well trained to use the system, with the mean score of 3.33 respondent agree that vendors are very unreliable, with the mean value of 3.27 respondents agree customization of ERP to organizational needs took long time. With the mean score of 3.07 respondents agree that improper suggestion was given by consultant for selection of ERP, with mean score of 2.27 respondents disagree that there is lack of top management support during ERP implementation process. With mean score

of 2.90 respondents disagree that actual cost of ERP implementation exceeded budget, with mean of 2.73 respondents disagreed that there is lacking in business reengineering skill. With mean score of 2.40 respondents disagreed that there is heavy gap in requirements, with mean score of 2.70 respondents disagree about poor planning in ERP implementation process. With mean score of 3.57 respondents agreed that employees' resistance to change is the one of the major challenge in ERP implementation process. With mean score 3.20 respondents agreed that there is underestimation of time and resources required from Top Management.

## IX: CONCLUSION

ERP systems are very complex and large. There should be careful planning and execution of ERP implementation. Implementing an ERP system determines whether it creates a competitive advantage or becomes headache for the industry. Top Management is the major contributor for successful ERP implementation with business practices and huge capital investments. It is concluded that ERP implementation is a continuous process with customization as per need of industry. Along with benefits researcher observed and found many challenges during implementation. These challenges are integration of different types of data was a big problem, improper training given to employees, unreliable vendors. One of the major problems found were ERP customization, improper suggestion given by the consultant, underestimation of time and resources and employees' resistance to the change.

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