Technology Transformation through Enterprise Resource Planning (ERP) towards Small and Medium Enterprises (SME), Tamilnadu.

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Abstract: To improve productivity and overall business performance, Enterprise Resource Planning (ERP) is one among the solutions for the Small and Medium Enterprises (Software companies) in order to face the global challenges. Though ERP systems, which evolved from Manufacturing Resource Planning (MRP II) systems, have many advantages, there are some failure stories also. The Indian firms and particularly Small and Medium Enterprises. The objective of this research is to determine to implement and design the functionality based on business process, to create a configuration and programming and to provide the valuable suggestion for improvement. For better controlling and management of data latest Technologies have been supplied within ERP software package. The descriptive research adopted in the study has been Simple Random Sampling method which is used with the sample of 86 respondents in which both primary and secondary data is used all over the Tamilnadu. The foremost purpose of descriptive analysis is description of the state of affairs because it exists at the present. The statistical tools have been used such as Chi-Square, Correlation, and Anova. Questioner method is used as a research instrument for collecting the data. The main characteristic of this methodology is that the investigator has no management over the variables; he will solely report what is going on or what's happening. This research concludes by saying it enhance the efficiency and effectiveness of organisational is improved and implemented by ERP system and they need to adopt a proactive business solution rather than a mere IT solution.

Keywords: ERP, SME, Integrated, Significance, Statistical tools, Questionnaire

1. Introduction

Big sized organizations all over the world used to have access to good talents in IT which can carry out an ERP implementation in a planned and managed way. SMBs stand different in this scenario. The question, whether ERP is essential for small size organization needs to be answered first. Most of the mini size firms within the world do not need an ERP. They have Business Automation systems until they grow to an explicit size. Enterprise Resource coming up with is commonly thought of in concert of the solution for his or her survival. Up to the mid-1990s, the Software companies sector in India had operated under a much protected economic regime characterized by limited competition and a highly regulated business environment. However, following the economic liberalization and opening up of the economy to foreign Multinational Companies (MNCs), SME have been forced to adopt modern business practices and method successively will offer a leading edge over its competitors. In this report, we have presented the issues and challenges in front of SMEs and about the benefits perceived and barriers observed in implementation of ERP in Chennai, one of the industrially advanced cities of India. Ideally, ERP system, a computer code package should offer and perform of a minimum of 2 systems. As an example, a computer code package that has each pay role associate in nursing and accounting functions may technically be thought of an ERP computer code package. ERP delivers one information that contains all information for the computer code modules, which might include:

1. Manufacturing

2. Supply chain management

3. Financials

4. Project management

5. Human resources

6. Customer relationship management

7. Data warehouse

8. Access control

9. Customization

ERP systems generally handle the producing, logistics, and distribution, inventory, and shipping, invoicing, and accounting for an organisation. ERP code will aid within the management of the many business activities, together with sales, marketing, delivery, billing, production, inventory management, quality management and human resource management. ERP has distended from coordination of producing processes to the mixing of enterprise-wide backend processes and it has evolved from inheritance implementation to a lot of versatile layer client-server architecture.

This table shows the following the evolution of ERP from 1960s to 1990s.

Timeline	System	Description
1960s	Inventory Management & Control	It is a combination of information technology and business processes of maintaining the appropriate level of stock in a warehouse. The activities of inventory management include identifying requirements, targets, techniques, monitoring, and status.
1970s	Material Requirement Planning (MRP)	MRP generates schedules for the operations and stuff purchases supported the assembly necessities of finished product, the structure of the assembly system, these inventories levels and therefore the heap size procedure for every operation.
1980s	Manufacturing Requirements Planning (MRP II)	Manufacturing Requirements Planning or MRP utilizes code package applications for coordinating manufacturing processes, from product planning, parts purchasing, and internal control to product distribution.
1990s	Enterprise Resource Planning (ERP)	Enterprise Resource Planning or ERP uses multi-module application computer code package for improving the performance of the internal business processes. ERP systems typically integrate business activities across useful departments, from product coming up with, components getting, internal control, product distribution, fulfilment, to order following. ERP computer code systems might embrace application modules for supporting selling, finance, accounting and human resources.

1.1.   Purpose of the research

Enterprise Resource Planning software is nowadays playing a major role in business operations. Since the introduction of this software it is gaining more and more importance in industry sector. Many software companies are developing the ERP package for different kinds of industries. Major players of ERP software package are SAP, Oracle, PeopleSoft, Navison, Ramco, 3i InfoTech and Edwards etc. Though they are more useful the cost of the ERP product is comparatively much higher than other software products. Therefore it is imperative to know the industrialist's response and expectations about these products. The present study is restricted to Small and Medium Enterprises in Chennai.

1.2.   Objective of the study

1.   To understand the present ERP modules being adapted in the company.
2.   To measure the level of awareness among employees towards the new system implementation.
3.   To analyse the ERP implementation effects in the overall functioning of the organization.
4.   To determine the expectations and awareness about ERP among employees.
5.   To provide the valuable suggestions for improvement.

1.3.   Expected deliverables

Mid-sized firms are facing troubles in maintaining their systems effectively due to various reasons. ERP is a boon to them. SAP is used by the majority of firms. This study can be considered as a sample for the whole SMB sector. Although there are several issues to be resolved, although the ERP market is growing and ERP vendors have shifted their focus to the SME segment   Firstly, the companies need to be made 'ERP aware'. They need to implement micro verticals in ERP to better meet the requirements of their vendors. Since the financial resources of the company are limited, the cost of ERP system needs to be further reduced. The companies on their part need to carefully evaluate their current IT systems and shortcomings while creating a wish list of things they want to achieve. While these are a number of the problems to be considered there are certainly more which the authors hope to seek out in their further study the conceptual model of ERP implementation in SME

2.   Review of literature

S.no	Category/ class	Barrier(s)	Name of author &year	Key Research Findings	Methodology used	Tools used
1	Ranking	Lack of alternatives of the choices	T.L.Satty and G.Hu 1998	The only valid method EM (Eigenvalue Method) which is used for deriving the priority vector from a pair wise comparison matrix, particularly when the matrix is inconsistent.	Ranking by EM Vector Method	AHP
2	System	Lack of Innovations	In jazz J.Chen 2001	1) Several critical planning issues are resolved. 2) This study recognize new windows of opportunities and challenges facing companies	Analysis	ERP system

3	Review	Lack of results	A.I. Nicolaou 2004	This paper presents contributions for both the practice and research on ERP system implementation effectiveness.	A case study methodology	Post imple mentatio n review (PIR)
4	Analysis	Lack of use of the 9-point scale	C. Macharis et al. 2004	1) Recommendations are formulated which is employed to integrate into PROMETHEE where there's number of useful AHP features. 2) Suggests that future academic research should concentrate on comparative assessments of the relative strengths and weaknesses of other MCA approaches.	Preference Ranking Organizatio n Method which is used for Enrichment Evaluation (PROMET HEE).	AHP
5	Framewo rk	Lack of feasibility	C.-C. Wei et al. 2005	1. To seek out the basic objectives and thus the mean for the ERP system framework 2. Moreover the target contains the thanks to measure the outcomes and thus the key points to be considered within the decision process.	ERP System framework.	AHP
6	Factors/ system	Lack of consistency may arise in AHP	J.L. Salmeron, I. Herrero, 2005	1. The Multiple choices are contemplated. 2. It provides how for ranking during the critical success factors.	AHP	SAP R/3
7	Software	Lack of generic methodology	A.S. Jadhav, R.M. Sonar,2009	(1) Within the evaluation of the software packages the analytic hierarchy process has been widely used. (2) There's lack of a typical list within the generic software evaluation criteria and its meaning, and (3) there is a need to develop a framework comprising of evaluation technique, software selection methodology, evaluation criteria, and lastly the system to assist decision makers in software selection.	Selectionof software frame work steps.	SimSel ect
8	Risk	Lack of cooperation and commitment of ERP users	J.L. Salmeron, C. Lopez 2010	1. The primary stage is that the most crucial stage within the ERP maintenance which may identifies, receives, classifies and also ranks the software modification. 2. The role of this study is to understand	MCDM	AHP

	and managers			the effective the danger management un the whole maintenance of the ERP.		
9	Software	Lack of decision making	A.S. Jadhav, R.M. Sonar, 2011	This research states the conceptual understanding of all the aspects associate with the software selection like (i) methodology describing factors and issues (ii) software evaluation criteria (iii) Techniques of software evaluation.	(i) generic methodology for software selection, (ii) software evaluation criteria	hybrid knowledge based system (HKB S) Approach.
10	Review	Lack of rank reversal, some theoretical disputes	A. Ishizaka, A. Labib, 2011	It consisting of modeling, pair-wise comparisons, judgment scales, the derivation methods, consistency indices, incomplete matrix, synthesis of the weights, sensitivity analysis and group decisions. These are the important areas of research in AHP.	Modeling &other MCDM Methods.	AHP
11	Evaluation	Lack of judgements	Lan Xu 2012	1) ERP sand table simulation evaluation been presented to debate the way to make a choice using AHP. 2) By using this method we will make enterprises consider factors influence operation of enterprise adequately, including dependence among the factors and feedback.	Sand table method	AHP
12	Applications (factors)/ Methods/ Materials	Lack of project management /Publishers	N. Subramanian, R. Ramanathan, 2012	1. There's an significant research gap which exist within the AHP application within the areas like managing stocks and forecasting layout of facilities,2.To identify the alternative areas the framework development is completed.	Observation Table	AHP

3.   Research methodology
3.1.   Type of research

Descriptive research includes surveys and fact-finding enquires of various kinds. The major purpose of descriptive research is description of the state of affairs because it exists at the present. The main characteristic of this method is that the researcher has no control over the variables; he can only report what went on or what's happening. This project involves descriptive research for data collection.

Fig.1: Concept of ERP Systems

3.2. Target Respondents

The respondents were employees of SME Industries. The research questions set are to be asked to them.

3.3. Sampling techniques

Sampling design- Simple random sampling method is used to collect data through questionnaires. Sample Size: Sample size decided for this project is 100, but the turnaround respondents were only 86. The report thus ended up with 86 respondents. Due to the present Covid 19 pandemic outburst, it was not possible to meet the respondents directly and collect the samples.

3.4. Data Processing

The type of data collected comprises primary data and secondary data.

Primary Data - The information which is collected as fresh for the primary time and thus happens to be original in character is named primary data. The primary data was collected from the customers of software products through a direct structured questionnaire. Respondent has filled the questionnaire

Secondary Data - Secondary data for the study has been compiled from the internet sources, magazines and newspapers which have been helpful in getting an insight of the present scenario.

3.5. Research instruments

A questionnaire maybe a research instrument method that consists of a group of questions or other sorts of prompts that aims to gather information from a respondent**.**

3.6. Statistical tools-

1. Percentage Analysis
2. Chi-Square Analysis
3. One Way ANOVA Test
4. Independent T Test

4.   Data analysis & interpretation

4.1.   Percentage Analysis

Table 1. Educational Qualification of the Respondents

OPTIONS	FREQUENCY	PERCENTAGE (%)
Non Graduate	2	2.3
Diploma	25	29.1
Graduate	51	59.3
Post Graduate	8	9.3

TOTAL	**86**	**100**

Interpretation: 2% respondents are non-graduates, 29% of them are diploma holders, 59% of them are graduates, and 9% of the respondents are post graduates.

Table 2. Work Experience of the Respondents

OPTIONS	FREQUENCY	PERCENTAGE (%)
Below 5 Years	45	52.3
6-10 Years	20	23.3
11-15 Years	15	17.4
Above 15 Years	6	7.0
TOTAL	**86**	**100**

Interpretation: 52% respondents have but 5 years of labor experience, 23% of them have 6-10 years of experience, 17% of them have 11-15 years of experience, 7% respondents have quiet 15 years of experience

4.1.1. Challenges in ERP

Table 3. Excess Stocks

OPTIONS	FREQUENCY	PERCENTAGE (%)
Strongly Agree	37	43.0
Agree	30	34.9
Neither agree nor disagree	10	11.6
Disagree	7	8.1
Strongly Disagree	2	2.3
TOTAL	**86**	**100**

Interpretation: 43% respondents strongly agree that holding excess stock is that the challenge in ERP, 35% of them accept as true with this, 12% of the respondents are neutral towards this, 8% respondents disagree and rest 2% of them strongly afflict this

Table 4. Wastage of Process

OPTIONS	FREQUENCY	PERCENTAGE (%)
Strongly Agree	34	39.5
Agree	30	34.9
Neither agree nor disagree	13	15.1
Disagree	7	8.1
Strongly Disagree	2	2.3
TOTAL	**86**	**100**

Interpretation: 40% respondents strongly agree that wastage of process is that the challenge in ERP, 35% of them accept as true with this, 15% of the respondents are neutral towards this, 8% respondents disagree and rest 2% of them strongly afflict this

Table 5. Utilization of Resources

OPTIONS	FREQUENCY	PERCENTAGE (%)
Strongly Agree	34	39.5
Agree	31	36.0
Neither agree nor disagree	11	12.8
Disagree	7	8.1
Strongly Disagree	3	3.5
TOTAL	**86**	**100**

Interpretation: 40% respondents strongly agree that utilization of resources is that the challenge in ERP, 36% of them accept as true with this, 13% of the respondents are neutral towards this, 8% respondents disagree and rest 3% of them strongly afflict this

Table 6. Lack of Proper Mis to Monitor the Process

OPTIONS	FREQUENCY	PERCENTAGE (%)
Strongly Agree	36	41.9
Agree	32	37.2
Neither agree nor disagree	9	10.5
Disagree	7	8.1
Strongly Disagree	2	2.3
TOTAL	**86**	**100**

Interpretation: 42% respondents strongly agree that lack of proper MIS to monitor the process is that the challenge in ERP, 37% of them accept as true with this, 10% of the respondents are neutral towards this, 8% respondents disagree and rest 2% of them strongly afflict this

Table 7. Packaging Issues

OPTIONS	FREQUENCY	PERCENTAGE (%)
Strongly Agree	36	41.9
Agree	31	36.0
Neither agree nor disagree	11	12.8
Disagree	6	7.0
Strongly Disagree	2	2.3

| TOTAL | 86 | 100 |

Interpretation: 42% respondents strongly agree that packaging issues is that the challenge in ERP, 36% of them accept as true with this, 13% of the respondents are neutral towards this, 7% respondents disagree and rest 2% of them strongly afflict this

4.1.2. Barriers in effective evolution of ERP

Table 8. Technology Implementation

OPTIONS	FREQUENCY	PERCENTAGE (%)
Strongly Agree	37	43.0
Agree	29	33.7
Neither agree nor disagree	10	11.6
Disagree	8	9.3
Strongly Disagree	2	2.3
TOTAL	86	100

Interpretation: 43% respondents strongly agree that technology implementation is the barrier in effective evolution of ERP, 34% of them accept as true with this, 12% of the respondents are neutral towards this, 9% respondents disagree and rest 2% of them strongly afflict this

Table 9. Lack of Management Commitment

OPTIONS	FREQUENCY	PERCENTAGE (%)
Strongly Agree	39	45.3
Agree	28	32.6
Neither agree nor disagree	11	12.8
Disagree	6	7.0
Strongly Disagree	2	2.3
TOTAL	86	100

Interpretation: 45% respondents strongly agree that lack of management commitment is that the barrier in effective evolution of ERP, 33% of them accept as true with this, 13% of the respondents are neutral towards this, 7% respondents disagree and rest 2% of them strongly afflict this

Table 10. Lack of Communication

OPTIONS	FREQUENCY	PERCENTAGE (%)
Strongly Agree	36	41.9
Agree	29	33.7
Neither agree nor disagree	11	12.8
Disagree	8	9.3

Strongly Disagree	2	2.3
TOTAL	**86**	**100**

Interpretation: 42% respondents strongly agree that lack of communication is that the barrier in effective evolution of ERP, 34% of them accept as true with this, 13% of the respondents are neutral towards this, 9% respondents disagree and rest 2% of them strongly afflict this

4.1.3. Need for integrated ERP

Table 11. Increase the Visibility in Supply Chain

OPTIONS	FREQUENCY	PERCENTAGE (%)
Strongly Agree	36	41.9
Agree	32	37.2
Neither agree nor disagree	9	10.5
Disagree	7	8.1
Strongly Disagree	2	2.3
TOTAL	**86**	**100**

Interpretation: 42% respondents strongly agree that increase the visibility in supply chain is that the need for an integrated ERP, 37% of them accept as true with this, 10% of the respondents are neutral towards this, 8% respondents disagree and rest 2% of them strongly afflict this

Table 12. Effective Tracking

OPTIONS	FREQUENCY	PERCENTAGE (%)
Strongly Agree	38	44.2
Agree	26	30.2
Neither agree nor disagree	11	12.8
Disagree	8	9.3
Strongly Disagree	3	3.5
TOTAL	**86**	**100**

Interpretation: 44% respondents strongly agree that effective tracking is that the need for an integrated ERP, 30% of them accept as true with this, 13% of the respondents are neutral towards this, 9% respondents disagree and rest 3% of them strongly afflict this

Table 13. 24 X 7 Support

OPTIONS	FREQUENCY	PERCENTAGE (%)
Strongly Agree	36	41.9
Agree	25	29.1
Neither agree nor disagree	16	18.6
Disagree	7	8.1

Strongly Disagree	2	2.3
TOTAL	**86**	**100**

Interpretation: 42% respondents strongly agree that 24 x 7 support is that the need for an integrated ERP, 29% of them accept as true with this, 19% of the respondents are neutral towards this, 8% respondents disagree and rest 2% of them strongly afflict this.

4.1.4. Benefits of integrated ERP

Table 14. Competitive Advantage

OPTIONS	FREQUENCY	PERCENTAGE (%)
Strongly Agree	32	37.2
Agree	25	29.1
Neither agree nor disagree	19	22.1
Disagree	6	7.0
Strongly Disagree	4	4.7
TOTAL	**86**	**100**

Interpretation: 37% respondents strongly agree that gaining competitive advantage is that the need for an integrated ERP, 29% of them accept as true with this, 22% of the respondents are neutral towards this, 7% respondents disagree and rest 5% of them strongly afflict this.

Table 15. Compliance to Standards

OPTIONS	FREQUENCY	PERCENTAGE (%)
Strongly Agree	37	43.0
Agree	27	31.4
Neither agree nor disagree	13	15.1
Disagree	6	7.0
Strongly Disagree	3	3.5
TOTAL	**86**	**100**

Interpretation: 43% respondents strongly agree that compliance to standards is that the need for an integrated ERP, 31% of them accept as true with this, 15% of the respondents are neutral towards this, 7% respondents disagree and the rest 3% of them strongly afflict this.

Table 16. Cost Effectiveness

OPTIONS	FREQUENCY	PERCENTAGE (%)
Strongly Agree	32	37.2
Agree	27	31.4
Neither agree nor disagree	17	19.8
Disagree	7	8.1

Strongly Disagree	3	3.5
TOTAL	**86**	**100**

Interpretation: 37% respondents strongly agree that cost effectiveness is that the need for an integrated ERP, 31% of them accept as true with this, 20% of the respondents are neutral towards this, 8% respondents disagree and rest 3% of them strongly afflict this.

Table 17. Reduction of Pilferage and Damages

OPTIONS	FREQUENCY	PERCENTAGE (%)
Strongly Agree	34	39.5
Agree	25	29.1
Neither agree nor disagree	16	18.6
Disagree	7	8.1
Strongly Disagree	4	4.7
TOTAL	**86**	**100**

Interpretation: 40% respondents strongly agree that reduction of pilferage and damages is that the need for an integrated ERP, 29% of them accept as true with this, 19% of the respondents are neutral towards this, 8% respondents disagree and rest 5% of them strongly afflict this.

4.2. Chi-Square Test

Chi-Square between age of the respondents and their opinion no or poorly done needs analysis as a barrier in effective evolution of ERP

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	13.832	12	.312
Likelihood Ratio	15.611	12	.210
Linear-by-Linear Association	.484	1	.487
N of Valid Cases	86		
a. 14 cells (70.0%) have expected but 5. The minimum expected count is .02.			

Interpretation: Chi square value of χ (12) 13.832. Significance 0.312 at 5% level of significance, table value 13.832 is > 0.312 and therefore the accepted Null Hypothesis. Hence there's no significant relationship between age of the respondents and their opinion no or poorly done needs analysis as a barrier in effective evolution of ERP

4.3. Anova Test

Hypothesis set between education of the respondents and the utilization of resources as a challenge in present ERP process

ANOVA					
Utilization					
	Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Between Groups	5.746	3	1.915	1.666	.181
Within Groups	94.254	82	1.149		
Total	100.000	85			

Interpretation: This is often the table that shows the output of the ANOVA analysis and that we haven't any statistically significant difference between our group means. We will see that the importance level is 0.181 ($p = .181$), which is quiet 0.05, therefore, there's no statistically significant relationship between education of the respondents and therefore the utilization of resources as a challenge in present ERP process

4.4. Cronbach Alpha

Cronbach coefficient was employed to determine the reliability for this research. The results been presented as below:-

Case Processing Summary			N	%
Cases		**Valid**	86	100.0
		Excluded	0	.0
		Total	86	100.0
a. List wise supported all variables within the procedure.				

Reliability Statistics		
Cronbach's Alpha	**Cronbach's Alpha Based on Standardized Items**	**N of Items**
.971	.963	25

Interpretation: Reliability test was administered using SPSS software and therefore the reliability of the item was measured. The result is as follows: The closer the reliability coefficient gets to the value of 1.0, the better the reliability of the measures is [**Cronbach, 1951**]. It can be seen that Cronbach's Alpha value of this study is 0.977 and the Cronbach's Alpha Based on Standardized Items with n as 25 is 0.971. So, the collected data is reliable. This scale can be considered to be excellent. The reliability test was used for the perception set of variables

4.5. Independent T Test

It is an inferential statistical **test** that determines whether there's a statistically significant difference between the means in two unrelated groups.

Group Statistics					
	Gender	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
Support	**Male**	83	2.00	1.093	.120
	Female	3	2.00	.000	.000

Independent Samples Test									
		Levene's Test for Equality of Variances		**t-test for Equality of Means**					
		F	**Sig.**	**t**	**df**	**Sig. (2tailed)**	**Mean Difference**	**Std. Error Difference**	**95% Confidence Interval of the Difference**
									Lower	**Upper**
Support	**Equal variances assumed**	5.149	.026	.000	84	1.000	.000	.635	-1.262	1.262
	Equal variances not assumed			.000	82.000	1.000	.000	.120	-.239	.239

Interpretation: From the above table it's clear that the importance (0.026) is lesser than 0.05. a worth but .05 means that the variability within the two conditions is different. That the scores in one condition vary an excessive amount of quiet the scores within second condition. Put scientifically, it means that the variability within the two conditions is statistically significant.

4.6. Correlation Coefficient

A Pearson product-moment correlation was run to work out the connection between experience of the respondents and their opinion on compliance to standards as a advantage of integrated ERP

Correlations		**Experience**	**Compliance**
Experience	**Pearson Correlation**	1	-.051
	Sig. (2-tailed)		.638
	N	86	86
Compliance	**Pearson Correlation**	-.051	1
	Sig. (2-tailed)	.638	
	N	86	86

Interpretation: The information showed a violation of normality, linearity or homoscedasticity. There was a indirect correlation between experience of the respondents and their opinion on

compliance to standards as a advantage of integrated ERP, which wasn't statistically significant (r = -0.051, n = 86, p = 1). The Pearson coefficient of correlation, r, is -0.051 which isn't statistically significant.

5. Findings, Suggestions

5.1. Findings of the Study

1.   1% respondents are having less than 20 years old, 55% of them 21-30 years old, 30% of them are 31-40 years old, and 14% of the respondents are above 40 years old

2.   97% respondents are male and rest 3% of the respondents is female

3.   2% respondents are non-graduates, 29% of them are diploma holders, 59% of them are graduates, and 9% of the respondents are post graduates

4.   52% respondents have less than 5 years of work experience, 23% of them have 6-10 years of experience, 17% of them have 11-15 years of experience, 7% respondents have more than 15 years of experience

5.   29% respondents are earning less than Rs.2 Lakhs per annum, 44% are earning 2-3 lakhs per year, and 23% respondents' income per year is 3-4 Lakhs, 3% of them are earning more than 4 Lakhs per annum

5.2. Challenges in ERP

1.   43% respondents strongly agree that holding excess stock is the challenge in ERP, 35% of them agree with this, 12% of the respondents are neutral towards this, 8% respondents disagree and rest 2% of them strongly disagree with this

2.   40% respondents strongly agree that wastage of process is the challenge in ERP, 35% of them agree with this, 15% of the respondents are neutral towards this, 8% respondents disagree and rest 2% of them strongly disagree with this

3.   40% respondents strongly agree that utilization of resources is the challenge in ERP, 36% of them agree with this, 13% of the respondents are neutral towards this, 8% respondents disagree and rest 3% of them strongly disagree with this

4.   42% respondents strongly agree that lack of proper MIS to monitor the process is the challenge in ERP, 37% of them agree with this, 10% of the respondents are neutral towards this, 8% respondents disagree and rest 2% of them strongly disagree with this

5.   42% respondents strongly agree that packaging issues is the challenge in ERP, 36% of them agree with this, 13% of the respondents are neutral towards this, 7% respondents disagree and rest 2% of them strongly disagree with this

5.3. Barriers in effective evolution of ERP

1.   43% respondents strongly agree that technology implementation is that the barrier in effective evolution of ERP, 34% of them accept as true with this, 12% of the respondents are neutral towards this, 9% respondents disagree and rest 2% of them strongly afflict this

2.   45% respondents strongly agree that lack of management commitment is that the barrier in effective evolution of ERP, 33% of them agree with this, 13% of the respondents are neutral towards this, 7% respondents disagree and rest 2% of them strongly afflict this

3.   43% respondents strongly agree that satisfaction with the status quo is that the barrier in effective evolution of ERP, 33% of them agree with this, 12% of the respondents are neutral towards this, 9% respondents disagree and rest 3% of them strongly afflict this

4.   43% respondents strongly agree that no or poorly done needs analysis is that the barrier in effective evolution of ERP, 37% of them agree with this, 12% of the respondents are neutral towards this, 6% respondents disagree and rest 2% of them strongly afflict this

5.   42% respondents strongly agree that lack of communication is that the barrier in effective evolution of ERP, 34% of them agree with this, 13% of the respondents are neutral towards this, 9% respondents disagree and rest 2% of them strongly afflict this

5.4. Need for integrated ERP

1.   42% respondents strongly agree that increase the visibility in supply chain is the need for an integrated ERP, 37% of them agree with this, 10% of the respondents are neutral towards this, 8% respondents disagree and rest 2% of them strongly disagree with this

2.   42% respondents strongly agree that correct valuation of Stock is the need for an integrated ERP, 33% of them agree with this, 12% of the respondents are neutral towards this, 10% respondents disagree and rest 3% of them strongly disagree with this

3.   44% respondents strongly agree that effective tracking is the need for an integrated ERP, 30% of them agree with this, 13% of the respondents are neutral towards this, 9% respondents disagree and rest 3% of them strongly disagree with this

4.   42% respondents strongly agree that 24 x 7 support is the need for an integrated ERP, 29% of them agree with this, 19% of the respondents are neutral towards this, 8% respondents disagree and rest 2% of them strongly disagree with this.

5.   42% respondents strongly agree that time saving is the need for an integrated ERP, 33% of them agree with this, 15% of the respondents are neutral towards this, 7% respondents disagree and rest 3% of them strongly disagree with this.

5.5. Benefits of integrated ERP

1.   37% respondents strongly agree that gaining competitive advantage is the benefit of integrated ERP, 29% of them agree with this, 22% of the respondents are neutral towards this, 7% respondents disagree and rest 5% of them strongly disagree with this.

2.   43% respondents strongly agree that compliance to standards is the benefit of integrated ERP, 31% of them agree with this, 15% of the respondents are neutral towards this, 7% respondents disagree and rest 3% of them strongly disagree with this.

3.   37% respondents strongly agree that cost effectiveness is the benefit of integrated ERP, 31% of them agree with this, 20% of the respondents are neutral towards this, 8% respondents disagree and rest 3% of them strongly disagree with this.

4.   40% respondents strongly agree that reduction of pilferage and damages is the benefit of integrated ERP, 29% of them agree with this, 19% of the respondents are neutral towards this, 8% respondents disagree and rest 5% of them strongly disagree with this.

5.   36% respondents strongly agree that effective transportation control is the benefit of integrated ERP, 33% of them agree with this, 21% of the respondents are neutral towards this, 8% respondents disagree and rest 2% of them strongly disagree with this.

5.6. Suggestions & Recommendations

1.   Work with an account consultant to finalize the Chart of Accounts first. Chart of accounts must ensure accordance with laws of the land. If this is often not finalized then any changes leads to having to vary data which is error prone.

2.   Start next on Fixed Assets of the corporate. Get all existing FAs entered within the system using the proper depreciation schedule permitted by law? Provide customers with a few of reports that give them information they have to understand that the knowledge got entered properly.

3.   Once accounts are found out, start purchasing module implementation. Sub divides the implementation into multiple flows (e.g. Import, Local purchase etc...). Trying to implement an entire purchasing cycle is treacherous thanks to the quantity of activity that must be done. You would like to pick certain flows, get those delivered and then move to subsequent flows.

4.   After purchasing, next should be inventory. Once material management is addressed, major pain areas for many of the companies in SME are going to be addressed. There are only a few SME that struggle with managing sales that's an honest problem those they skills to handle. Inventory execution will include QA at the time of receipt, material rejection etc.

5.   Manufacturing should be handled last. This is often for the straightforward reason that within the SME sector, there are only a few companies who optimize Manufacturing while implementing ERP. In other words, there are not any major gains to be had when one implements ERP for the primary time. ERP in manufacturing starts showing results once the organization is employed to ERP and data residing in ERP.

6.   It is my belief that ERP implementations in SME will benefit greatly by using the fundamentals of agile methodology.

7.   Demonstrate the merchandise.

6. Conclusion

ERP systems provide better visibility to the working of the organization and disciplined way of working. SME are the backbone of the Indian economy and are today faced with global competition. Therefore it becomes much imperative for them to look upon that means of responding to the dynamic markets. Nowadays, ERP systems have become the most followed IT strategy for most large companies. SME too are moving towards ERP systems. Definitely they must need to adopt a proactive approach towards ERP by considering as a business solution rather than a mere IT solution. Though the ERP market is evolving and ERP vendors have to adopt and shift their focus to the SME segment, thus many issues will be resolved. Firstly, SME need to be made 'ERP aware'. Vendors need to micro verticals the ERP solution to better meet the requirements of SME. Since the financial resources of SME are limited, the cost of ERP system needs to be further reduced. SME on their part need to carefully evaluate their current IT systems and document its shortcomings while creating a wish list of what they want to achieve. While these are some of the common issues that to be considered but there are certainly many more which the authors hope to find in their further research. The conceptual model of ERP implementation in SME.

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