

A STUDY ON TECHNOLOGY TRANSFORMATION OF ENTERPRISE RESOURCE [PLANNING ERP TOWARDS SMALL AND MEDIUM ENTERPRISES]

Submitted in partial fulfillment of the
requirements for The award of

Master of Business Administration

By

AMMU PREETHI.S
Register No: 42410072



**DEPARTMENT OF BUSINESS
ADMINISTRATION SCHOOL OF MANAGEMENT STUDIES**

SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

**Accredited with Grade “A++” by NAAC | 12B Status by
UGC | CATEGORY - 1 UNIVERSITY BY UGC | Approved
by AICTE JEPPIAAR NAGAR, RAJIV GANDHI SALAI,
CHENNAI - 600 119**

DECEMBER 2023



SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
(DEEMED TO BE UNIVERSITY)
CATEGORY - 1 UNIVERSITY BY UGC**

SCHOOL OF MANAGEMENT STUDIES

BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **AMMU PREETHI.S 42410072** who carried out the Project Training “**A study on technology transformation of enterprise resource [planning ERP towards small and medium enterprise]** “ under my supervision from October 2023 to December 2023.

Dr. Lavanya M

**Internal guide
Guide**

External

Dr. BHUVANESWARI .G, MBA., Ph.D

Dean – School of Management Studies

Submitted for Viva voce Examination held on _____

Internal Examiner

External Examiner

DECLARATION

I **AMMU PREETHI.S (42410072)** hereby declare that the Project Report entitled "**A study on technology transformation of enterprise resource [planning ERP towards small and medium enterprise]**" done by me under the guidance of **DR.LAVANYA M** is submitted in partial fulfillment of the requirements for the award of Master of Business Administration degree.

DATE:

PLACE:

AMMU PREETHI S

ACKNOWLEDGEMENT

I am pleased to acknowledge my sincere thanks to Board of Management of **SATHYABAMA** for their kind encouragement in doing this project and for completing it successfully. I am grateful to them.

I convey my sincere thanks to **Dr. G. Bhuvaneswari, MBA., Ph.D., Dean - School of Management Studies** and **Dr. A. Palani, M.Com., M.Phil., M.B.A., Ph.D., - Head - School of Management Studies** for providing me necessary support and details at the right time during the progressive reviews.

I would like to express my sincere and deep sense of gratitude to my Project Guide **DR.LAVANYA M** for her valuable guidance, suggestions and constant encouragement paved way for the successful completion of my project work.

I wish to express my thanks to all Teaching and Non-teaching staff members of the **School of Management Studies** who were helpful in many ways for the completion of the project.

AMMU PREETHI.S

ABSTRACT

To improve productivity and overall business performance, Enterprise Resource Planning (ERP) is one of 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 especially Small and Medium Enterprises

SME are unable to decide upon effectiveness of SAP-ERP implemented recently. On the basis of this present study, the company would come to know how SAP ERP is changing the business environment of SME by an in-depth interview with the employees of SME. This thesis present issues and challenges in front of the company and similar SME companies.

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, Navision, 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 SME Industries, Chennai

TABLE OF CONTENTS

CHAPTER NO	TITLE NO	TITLE	PAGE NO
		ABSTRACT	5
		LIST OF TABLES	8
		LIST OF CHARTS	10
1		INTRODUCTION	12
	1.1	INTRODUCTION	12
	1.2	INDUSTRY PROFILE	14
	1.3	IDENTIFIED PROBLEM	15
	1.4	NEED FOR THE STUDY	15
	1.5	OBJECTIVE OF THE STUDY	15
	1.6	SCOPE OF THE STUDY	16
	1.7	EXPECTED DELIVERABLES	16
2		REVIEW OF LITERATURE	17
	2.1	REVIEW OF LITERATURE	17
	2.2	RESEARCH GAP	19
3		RESEARCH METHODOLOGY	22
	3.1	TYPE OF PROJECT	22

	3.2	RESEARCH DESIGN	22
	3.3	TARGET RESPONDENTS	22
	3.4	SAMPLING METHODS	22
	3.5	DATA PROCESSING	22
	3.6	TOOL FOR ANALYSIS	23
	3.7	LIMITATIONS	23
4		DATA ANALYSIS & INTERPRETATION	24
	4.1	PERCENTAGE ANALYSIS	24
	4.2	CHI SQUARE TEST	49
	4.3	ONE WAY ANOVA TEST	51
	4.4	CRONBACHALPHA	52
	4.5	INDEPENDENT T TEST	53
	4.6	CORRELATION CO-EFFICIENT	56
5		FINDINGS,SUGGESTION&CONCLUSIO N	58
	5.1	FINDINGS OF THE STUDY	58
	5.2	SUGGESTIONS & RECOMMENDATIONS	60
	5.3	CONCLUSION	61
		BIBLIOGRAPHY	62
		QUESTIONNAIRE	63

LIST OF TABLES

TABLE NO.	PARTICULARS	PAGE NO.
1	Table indicating the age of the respondents	24
2	Table indicating the gender of the respondents	25
3	Table indicating the education qualification of the respondents	26
4	Table indicating the work experience of the respondents	27
5	Table indicating the income level of the respondents	28
6	Table indicating the excess stocks	29
7	Table indicating the wastage of process	30
8	Table indicating the utilization of resources	31
9	Table indicating the lack of proper MIS to monitor the process	32
10	Table indicating the packaging issues	33
11	Table indicating the technology implementation	34
12	Table indicating the lack of management commitment	35
13	Table indicating the satisfaction with the status quo	36
14	Table indicating the no or poorly done needs analysis	37
15	Table indicating the lack of communication	38
16	Table indicating increase the visibility in supply chain	39

17	Table indicating the correct valuation of stock	40
18	Table indicating the effective tracking	41
19	Table indicating the 24*7 support	42
20	Table indicating the time saving	43
21	Table indicating the competitive advantage	44
22	Table indicating the compliance to standards	45
23	Table indicating the cost effectiveness	46
24	Table indicating the reduction of pilferage and damages	47
25	Table indicating the effective transportation control	48

LIST OF CHARTS

CHART NO.	PARTICULARS	PAGE NO.
1	Chart representing the age of the respondents	24
2	Chart representing the gender of the respondents	25
3	Chart representing the education qualification of the respondents	26
4	Chart representing the work experience of the respondents	27
5	Chart representing the income level of the respondents	28
6	Chart representing the excess stocks	29
7	Chart representing the wastage of process	30
8	Chart representing the utilization of resources	31
9	Chart representing the lack of proper MIS to monitor the process	32
10	Chart representing the packaging issues	33
11	Chart representing the technology implementation	34
12	Chart representing the lack of management commitment	35
13	Chart representing the satisfaction with the status quo	36
14	Chart representing the no or poorly done needs analysis	37
15	Chart representing the lack of communication	38
16	Chart representing the increase the visibility in supply chain	39
17	Chart representing the correct valuation of stock	40

18	Chart representing the effective tracking	41
19	Chart representing the 24*7 support	42
20	Chart representing the time saving	43
21	Chart representing the competitive advantage	44
22	Chart representing the compliance to standards	45
23	Chart representing the cost effectiveness	46
24	Chart representing the reduction of pilferage and damages	47
25	Chart representing the effective transportation control	48

CHAPTER 1

INTRODUCTION

1.1 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 small size companies in the world do not need an ERP. They need Business Automation systems till they grow to a certain size. In the post liberalization and opening up of the economy business era, ease in international trade barriers, economic liberalization, globalization, privatization, disinvestments and deregulation have thrown several challenges to Small and Medium-Sized Enterprises in the fast developing economies like India.

Compressed product development cycles, cut throat domestic and global competition, economic downturns, rapidly changing customer demands and volatile financial markets have all increased the pressure on Software companies to come up with effective and competitive capabilities to survive and succeed. Enterprise Resource Planning is often considered as one of the solutions for their survival.

Up to mid-1990s, Software companies sector in India had operated under a much- protected economic regime characterized by limited competition and a highly regulated business environment. This business atmosphere had resulted in limited focus on process efficiencies, centralized control structures, highly formalized business settings and lack of professional business practices **(Ranganathan and Kannabiran, 2004).**

However, following the economic liberalization and opening up of the economy to foreign Multi-National Companies (MNCs), SME have been forced to adopt modern business practices and strategies, which in turn can provide a cutting

edge over its competitors. In this report, I 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. These systems can now be found in non-manufacturing businesses, non-profit organizations and governments. To be considered an ERP system, a software package must provide the function of at least two systems. For example, a software package that provides both payroll and accounting functions could technically be considered an ERP software package. Examples of modules in an ERP which formerly would have been stand-alone applications include: Product lifecycle management, Supply chain management (e.g. Purchasing, Manufacturing and Distribution), Warehouse Management, Customer Relationship Management (CRM), Sales Order Processing, Online Sales, Financials, Human Resources, and Decision Support System.

Enterprise resource planning is a term originally derived from manufacturing resource planning (MRP II) that followed material requirements planning (MRP). MRP evolved into ERP when "routings" became a major part of the software architecture and a company's capacity planning activity also became a part of the standard software activity. ERP systems typically handle the manufacturing, logistics, and distribution, inventory, shipping, invoicing, and accounting for a company. ERP software can aid in the control of many business activities, including sales, marketing, delivery, billing, production, inventory management, quality management and human resource management.

ERP (Enterprise Resource Planning) is the evolution of Manufacturing Requirements Planning (MRP) II. From business perspective, ERP has expanded from coordination of manufacturing processes to the integration of enterprise-wide backend processes. From technological aspect, ERP has evolved from legacy implementation to more flexible tiered client-server architecture. The following table summarizes the evolution of ERP from 1960s to 1990s.

EVOLUTION OF ERP SYSTEMS

The evolution of ERP systems closely followed the spectacular developments in the field of computer hardware and software systems.

In the 1960s most organizations designed, developed and implemented centralized computing systems, mostly automating their inventory control systems using inventory control packages (IC). These were legacy systems based on programming languages such as COBOL, ALGOL and FORTRAN. Material requirements planning (MRP) systems were developed in the 1970s which involved mainly planning the product or parts requirements according to the master production schedule. Following this route new software systems called manufacturing resources planning (MRP II) were introduced in the 1980s with an emphasis on optimizing manufacturing processes by synchronizing the materials with production requirements. MRP II included areas such as shop floor and distribution management, project management, finance, human resource and engineering. ERP systems first appeared in the late 1980s and the beginning of the 1990s with the power of enterprise-wide inter-functional coordination and integration. Based on the technological foundations of MRP and MRP II, ERP systems integrate business processes including manufacturing, distribution, accounting, financial, human resource management, project management, inventory management, service and maintenance, and transportation, providing accessibility, visibility and consistency across the enterprise.

1.2 INDUSTRY PROFILE

Ever since the onset of the financial crisis, the global economy has been struggling to revive itself and achieve a healthy growth rate. The global growth rate for last year and this year are projected at 3.40% and 3.80%. But compared to this, India's GDP continues to grow at a fast pace, outstripping major world economies. According to IMF, India is projected to grow at 7.80% for this fiscal year. Source: Department of Commerce, Govt. of India. Without any dispute,

SMEs are one of the key drivers behind this growth story. This sector, comprising of manufacturing, infrastructure, service industry, food processing, packaging, chemicals, and IT, has emerged as the most vibrant and dynamic engine of growth of Indian economy over the past few decades.

1.3 IDENTIFIED PROBLEM

The project titled, “A Study on the ERP implementation challenges in Small and Medium Enterprises”, speaks about the causes and effects of ERP system implemented in various departments of SME. Mid-sized firms are facing troubles in maintaining their systems effectively due to various reasons. ERP is a boon to them. SME is using SAP ERP. This study about SME can be considered as a sample for the whole SMB sector.

1.4 NEED FOR THE STUDY

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, Navision, 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

1.5 OBJECTIVE OF THE STUDY

Primary Objective

To study the technological evolution of enterprise based business solutions

providedby ERP

Secondary Objectives

To understand the present ERP modules being adapted in the company

To study and analyze the need of ERP in a manufacturing company

To study the expectations and awareness about ERP among employees

To inform management about scope of technology outsourcing at SME

1.6 SCOPE OF THE STUDY

The project aims to find the effectiveness of Enterprise Resource Planning Software implementation in SME in Chennai. The scope of the project is limited to Chennai alone and it helps to identify the factors that satisfy users the most.

1.7 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 majority of firms. This study can be considered as a sample for the whole SMB sector. Though the ERP market is growing and ERP vendors have shifted their focus to the SME segment, there are several issues to be resolved. 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 some of the issues to be considered there are certainly many more which the authors hope to find in their further study the conceptual model of ERP implementation in SME

CHAPTER 2

REVIEW OF LITERATURE

2.1 REVIEW OF LITERATURE

- **Basem, Mohammed and Nidhal (2016)**, Information systems designed and developed in house to fit a specific or small set of functions. It's typically much smaller than enterprise system, however most of these developments also required more time, high cost to develop, not integrated, unclear customer requirements, and the most importantly working version is available during the implementation phase. On the other hand, many organizations rely on Enterprise Resource Planning (ERP) systems to manage and process their entire business requirements, including a large size of applications, where these systems comply with various business needs, like expanding markets, increasing competition and technology developments. Most of ERP systems should have specific characteristics to achieve the developments of business processes. ERP systems work in dealing with customization off-the-shelf ERP package, or changing organization business process and people structure to suite with the package. The present study outlines the main and specific characteristics distinct from other information systems and discusses the influence of various enterprise system characteristics such as standardization integration, flexibility, best practices and process-orientation. The aim of this study is to recapitulation of the main characteristics of ERP systems and concludes the impact of ERP key characteristics upon the performance of the system in a given organizational setting and focusing on functionality, procedures and business needs in organizations

According to **Nileemaet.al., (2013)**, in order to understand dynamic behavior of Enterprise Resource Planning system, it is highly essential to study the evolution of modern ERP systems on time and technology axes. This paper critically analyses how the changing need of industries changed nature of ERP technologies. Especially evolutions of hardware, software and integration aspects are critically studied in this paper.

- **Hermenegildo, Martin and Raúl (2010)** in their article make a review from the origin to currently of information systems for business management. It is specially emphasized about the changes that have occurred in recent years in such kind of systems and in what are the trends for the coming future. Between this trends it is possible identify several technical advances and new functionalities that are being joined or that will be soon. For example, a new functionality or advance that is incorporating is the m-commerce, which not only can influence the information system in a high degree but also in the strategies and management activities of currently companies.

Sock and Charles, (2000), in a competitive environment, firms continually need to establish new business objectives to fulfill their corporate visions. A whole organization should be structured to achieve these objectives. In order to support the objectives, information technology (IT) needs to be aligned to the organization's mission. IT professionals have provided systems for the organization and, in most cases; these systems consist of individual function, which should be used in an integrated manner. Enterprise Resource Planning (ERP) software has emerged to offer an integrated IT solution. It is suggested that ERP could facilitate achieving compatibility between task characteristics and technology characteristics, along overdue IT solution. ERP has become one of the major IT investments for many organizations. Unfortunately, little research has been done to provide managers guidance on ERP potential for their organizations. Some useful information about ERP can be found by examining the technological evolution of ERP from MRP.

- **Helmut Michael and Guy(2000)**, though ERP has gained some prominence in the IS literature over the past few years and is a significant phenomenon in practice, through a) historical analysis, b) metaanalysis of representative IS literature, and c) a survey of academic experts, we reveal dissenting views on the phenomenon. Given this diversity of perspectives, it is unlikely that at this stage a broadly agreed definition of ERP can be achieved. We thus seek to increase awareness of the issues and stimulate further discussion, with the ultimate aim being to: (1) aid communication amongst researchers and between researchers and practitioners; (2) inform development of teaching materials on ERP and related concepts in university curricula and in commercial education and training; and (3) aid communication amongst clients, consultants and vendors. Increased transparency of the ERP-concept within IS may also benefit other aligned fields of knowledge.

2.2 RESEARCH GAP

ERP system is an IT solution that helps organizations to achieve enterprise wide integration which results in faster access to accurate information required for decision making. ERP has its roots in manufacturing as the name is an extension of Manufacturing Resource Planning (MRP II) (Davenport, 2000). Today, an ERP system is considered as the price of entry for running a business and for being connected to other businesses, which allows for business-to-business electronic commerce (**Boykin, 2001**). Many multinationals restrict their business to only those companies that use the same ERP as them (**Shehab et al., 2004**). As Software companies have MNCs as their clients, they have to consider ERP systems as a requirement to allow for tighter integration with their larger counterparts. Before ERP came into existence, different departments had their own software system to meet their requirements. This resulted in a fragmentation of information, as all of the information was stored separately on different systems in business units, factories etc. sometimes spread across the world. This made it impossible to get accurate information on

time. In 1990s, globalization led to immense competition and companies, especially in the manufacturing sector, realized the need for more customer focus and shortened product life cycles. Corporations had to move towards agile manufacturing, continuous improvement of business processes and business process reengineering. This required an integration of manufacturing with other functional areas like accounting, marketing, HR, etc. This led to the evolution of MRPII to ERP systems **(Sadagopan, 1999)**. ERP combines all the business functions together into one single integrated system with a single central database as shown in. This system serves the information needs of all the departments across geographies, while allowing them to communicate with each other. A typical ERP system consists of modules for manufacturing, Production Planning, Quality Management, Financial Management, Human Resource, Manufacturing and Logistics and Sales and Distribution. Once an enterprise wide implementation is in place, operating managers are relieved of routine decisions and they thus have the time to plan and execute long-term decisions that are vital for the growth of an organization. It leads to significant cost savings as the health of the organization is continuously being monitored. Though the cost of an ERP system is very high, it becomes insignificant in the face of the benefits a proper ERP implementation provides in the long run **(Sadagopan, 1999)**.

ERP combines all the business functions together into one single integrated system with a single central database as shown in. This system serves the information needs of all the departments across geographies, while allowing them to communicate with each other. A typical ERP system consists of modules for manufacturing, Production Planning, Quality Management, Financial Management, Human Resource, Manufacturing and Logistics and Sales and Distribution. Once an enterprise wide implementation is in place, operating managers are relieved of routine decisions and they thus have the time to plan and execute long-term decisions that are vital for the growth of an organization. It leads to significant cost savings as the health of the organization is continuously being monitored. Though the cost of an ERP system is very high, it

becomes insignificant in the face of the benefits a proper ERP implementation provides in the long run (**Sadagopan, 1999**).

ERP Benefits

The benefits of ERP in any organization are beyond doubt. Some of the key benefits are listed below (**Garg et al, 2006**)

- Reduced Planning cycle time
- Reduced manufacturing cycle time
- Reduced inventory
- Reduced error in ordering
- Reduced requirement of manpower
- Enables faster response to changing market situations

CHAPTER 3

RESEARCH METHODOLOGY

3.1 TYPE OF PROJECT

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

3.2 RESEARCH DESIGN

Research Design is the conceptual structure within which research is conducted. It constitutes the blueprint for collection, measurement, & analysis of the data. The design used for carrying out this research is exploratory & experience based.

I used the questionnaire as a tool for gathering data.

3.3 TARGET RESPONDENTS

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

3.4 SAMPLING METHODS

Simple random sampling method is used to collect data through questionnaire.

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.

3.5 DATA PROCESSING

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

Primary Data: The data which are collected as fresh for the first time and thus happen to be original in character is called 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 present scenario.

3.6 TOOL FOR ANALYSIS

- ✓ Percentage Analysis
- ✓ Weighted Average
- ✓ Chi-Square Analysis

3.7 LIMITATIONS

- ✓ One of the most important limitations was the time period. The time period was not sufficient to cover all details of the ERP functions.
- ✓ The other limitation was the non-cooperative nature of the people to give information and interviews.

CHAPTER 4

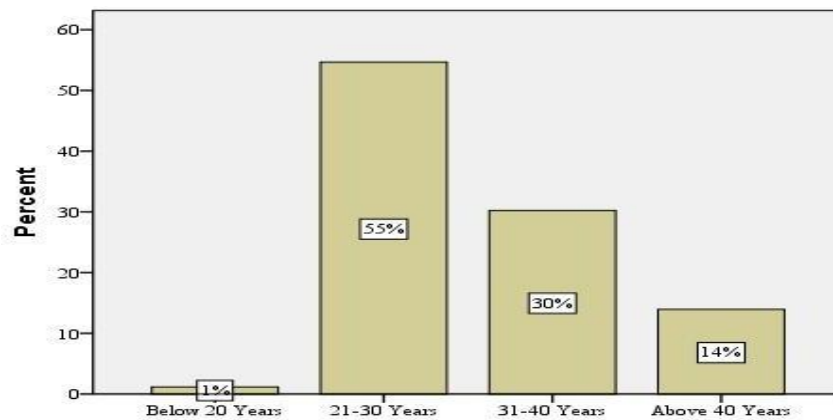
DATA ANALYSIS & INTERPRETATION

4.1 PERCENTAGE ANALYSIS

TABLE 1: AGE OF THE RESPONDENTS

OPTIONS	FREQUENCY	PERCENTAGE (%)
Below 20 Years	1	1.2
21-30 Years	47	54.7
31-40 Years	26	30.2
Above 40 Years	12	14.0
TOTAL	86	100

CHART 1: AGE OF THE RESPONDENTS

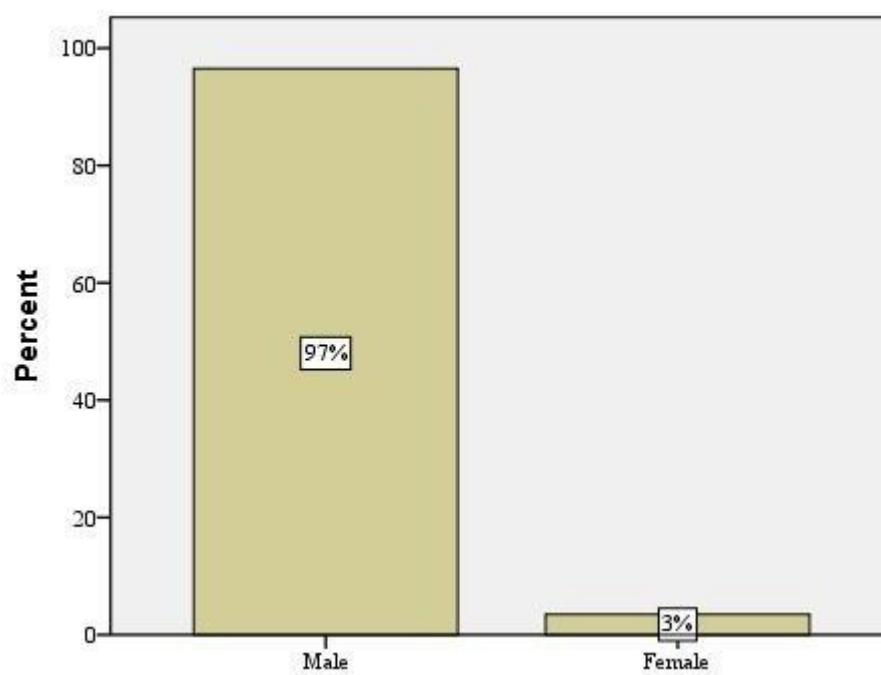


Interpretation: 1% respondents are having less than 20 years old, 55% of them 21- 30 years old, 30% of them are 31-40 years old, and 14% of the respondents are above 40 years old

TABLE 2: GENDER OF THE RESPONDENTS

OPTIONS	FREQUEN CY	PERCENTAGE (%)
Male	83	96.5
Female	3	3.5
TOTAL	86	100

CHART 2: GENDER OF THE RESPONDENTS

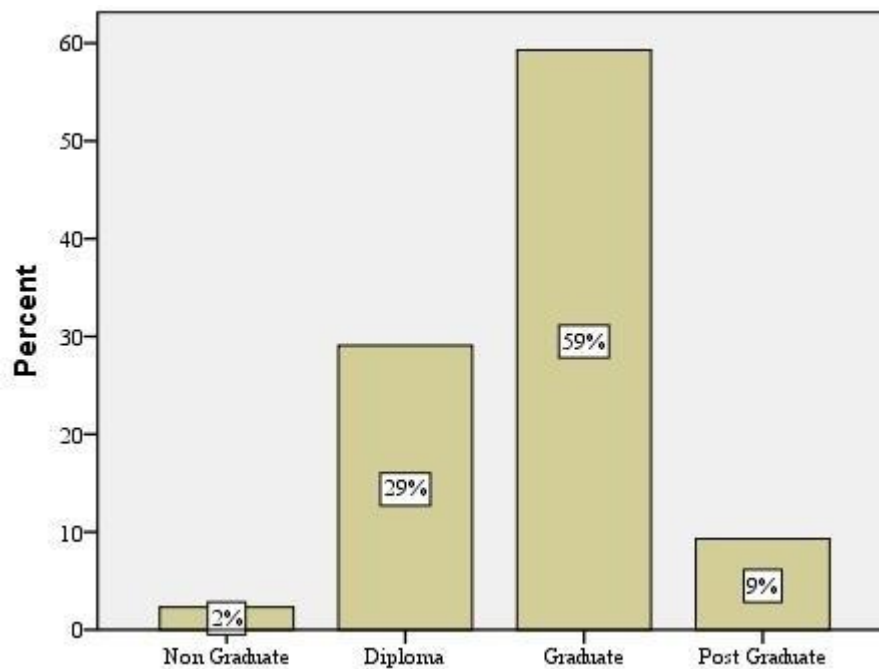


Interpretation: 97% respondents are male and rest 3% of the respondents is female

TABLE 3: 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

CHART 3: EDUCATIONAL QUALIFICATION

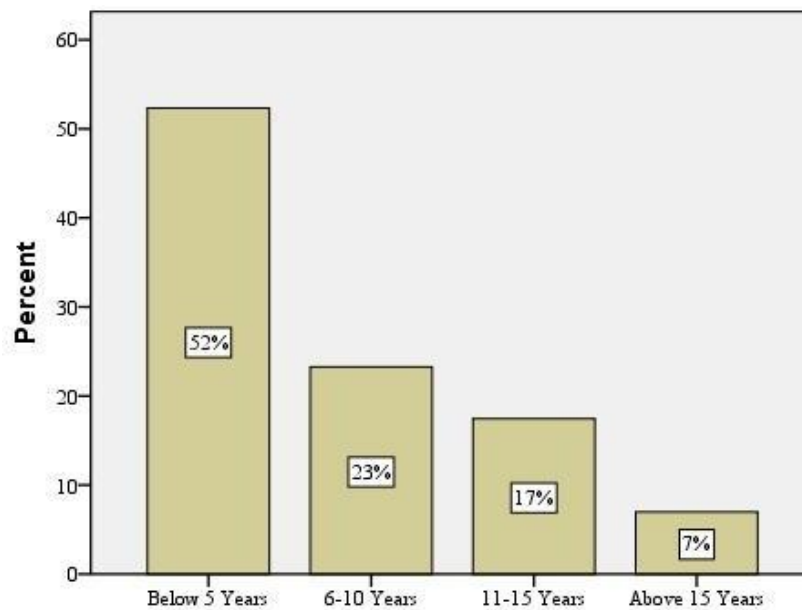


Interpretation: 2% respondents are non-graduates, 29% of them are diploma holders, 59% of them are graduates, and 9% of the respondents are post graduates

TABLE 4: 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

CHART 4: WORK EXPERIENCE OF THE RESPONDENTS

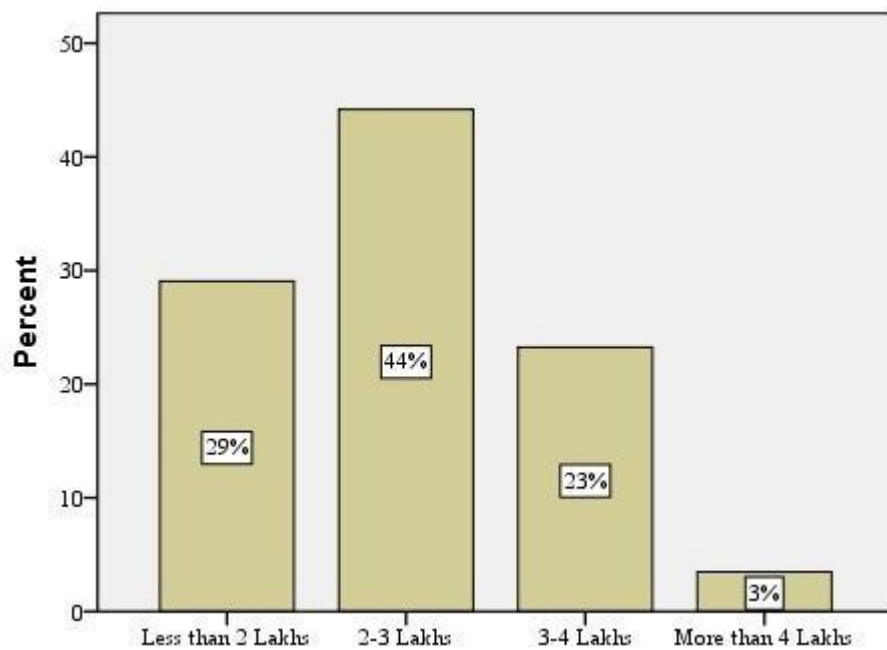


Interpretation: 52% respondents have less than 5 years of work experience, 23% of them have 6-10 years of experience, 17% of them have 11-15 years of experience, 7% respondents have more than 15 years of experience

TABLE 5: INCOME LEVEL OF THE RESPONDENTS

OPTIONS	FREQUENCY	PERCENTAGE (%)
Less than 2 Lakhs	25	29.1
2-3 Lakhs	38	44.2
3-4 Lakhs	20	23.3
More than 4 Lakhs	3	3.5
TOTAL	86	100

CHART 5: INCOME LEVEL OF THE RESPONDENTS



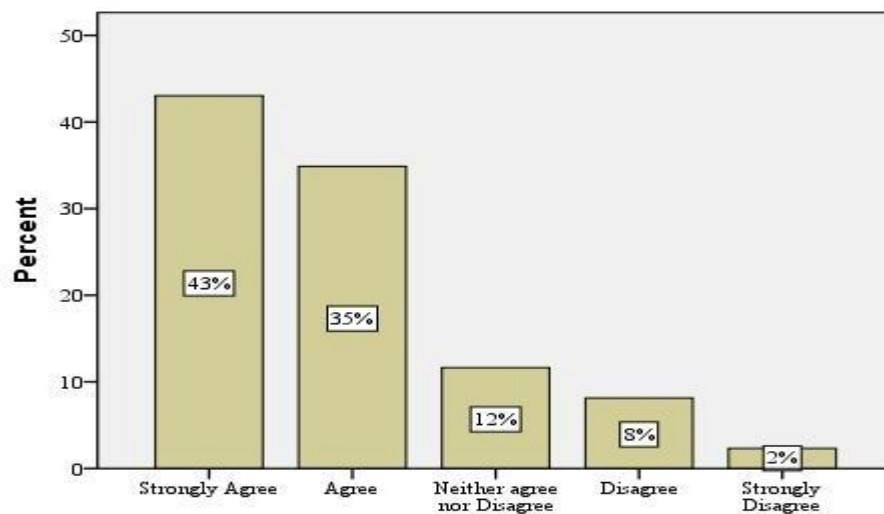
Interpretation: 29% respondents are earning less than Rs.2 Lakh per annul, 44%are earning 2-3 lakh per year, and 23% respondents' income per year is 3-4 Lakh,3% of them are earning more than 4 Lakh per annul

Challenges in ERP

TABLE 6: 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

CHART 6: EXCESS STOCKS

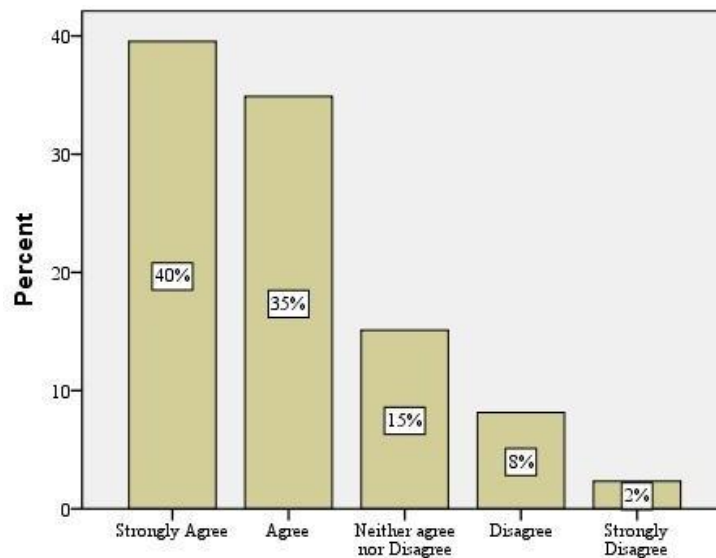


Interpretation: 43% respondents strongly agree that holding excess stock is the challenge in ERP, 35% of them agree with this, 12% of the respondents are neutral towards this, 8% and rest 2% of them strongly disagree with this

TABLE 7: 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

CHART 7: WASTAGE OF PROCESS

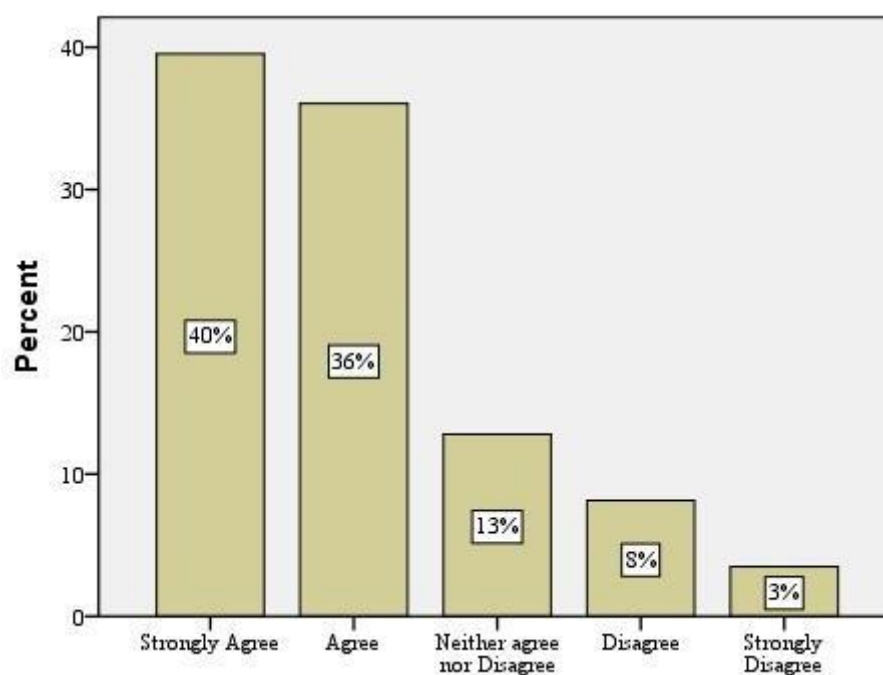


Interpretation: 40% respondents strongly agree that wastage of process is the challenge in ERP, 35% of them agree with this, 15% of the respondents are neutral towards this, 8% respondents disagree and rest 2% of them strongly disagree with this

TABLE 8: 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

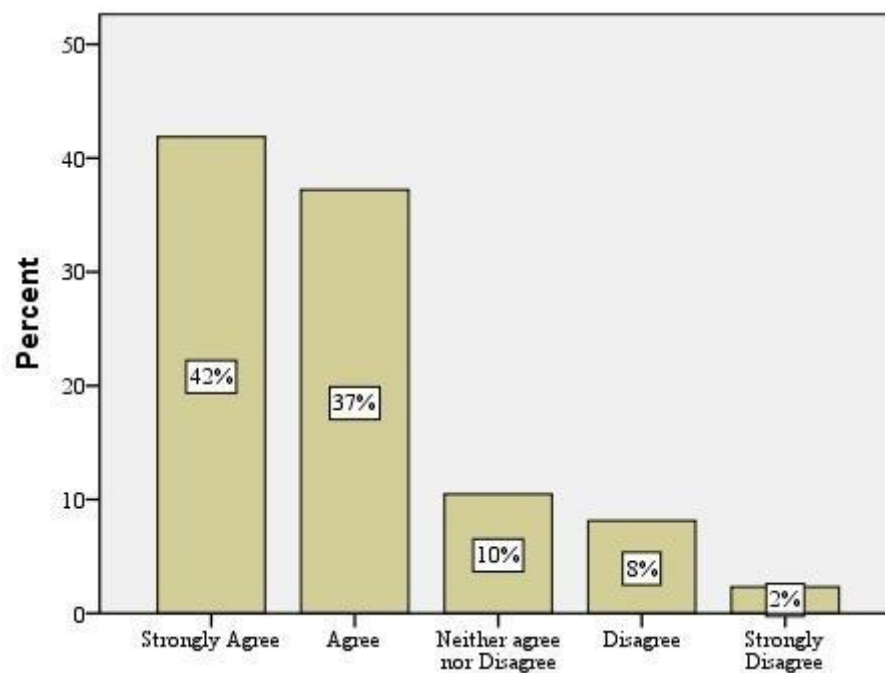
CHART 8: UTILIZATION OF RESOURCES



Interpretation: 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

TABLE 9: 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

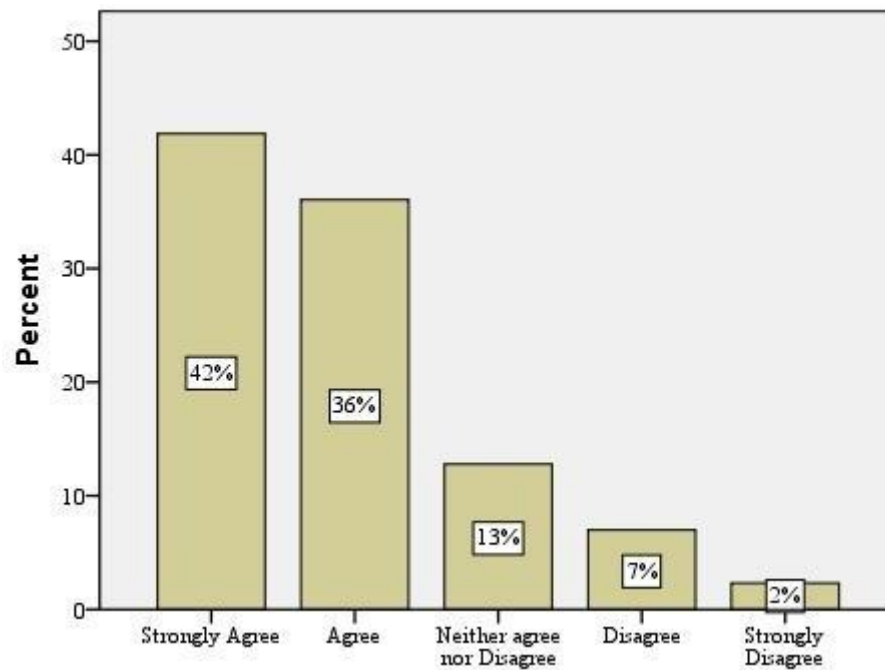
CHART9: LACK OF PROPER MIS TO MONITOR THE PROCESS

Interpretation: 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

TABLE 10: 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

CHART10:PACKAGING ISSUES



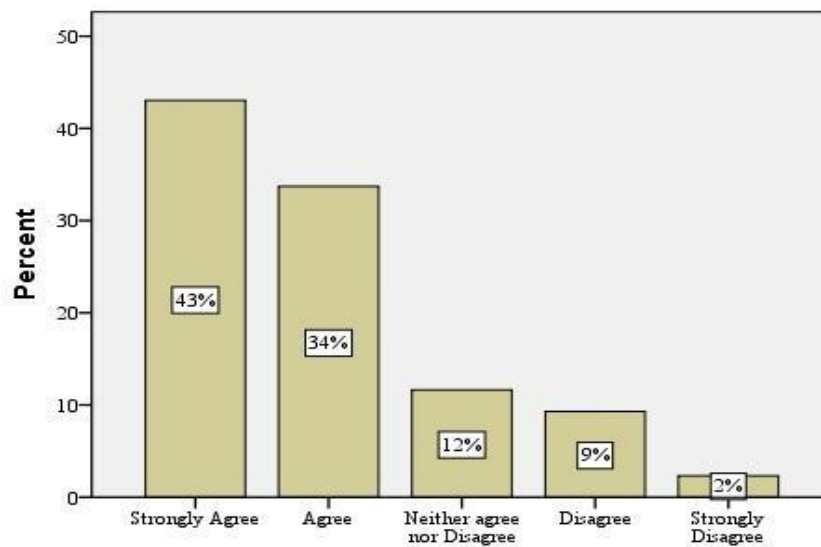
Interpretation: 42% respondents strongly agree that packaging issues is the challenge in ERP, 36% of them agree with this, 13% of the respondents are neutral towards this, 7% respondents disagree and rest 2% of them strongly disagree with this

Barriers in effective evolution of ERP

TABLE 11: 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

CHART 11: TECHNOLOGY IMPLEMENTATION

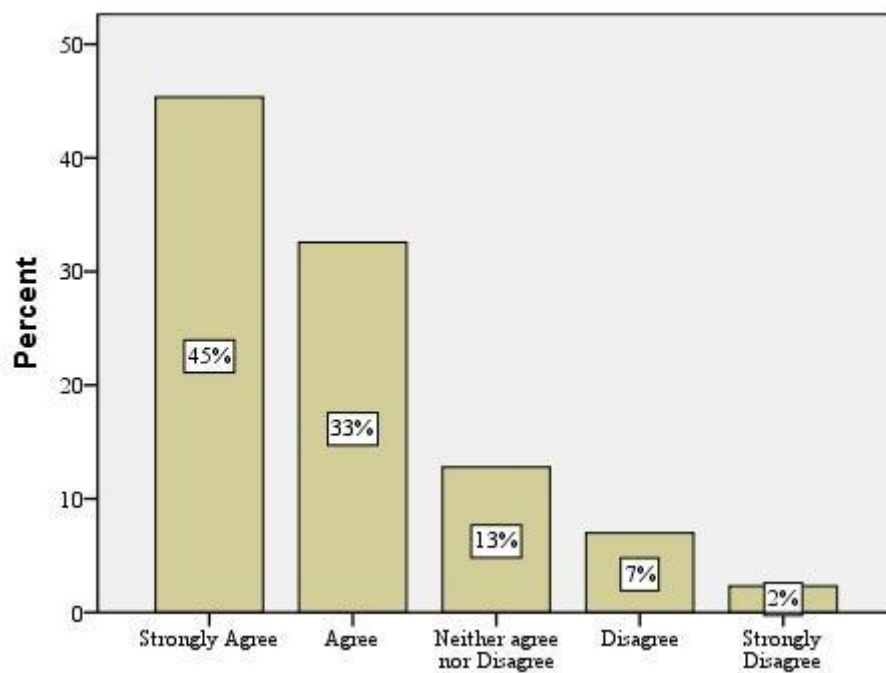


Interpretation: 43% respondents strongly agree that technology implementation is the barrier in effective evolution of ERP, 34% of them agree with this, 12% of the respondents are neutral towards this, 9% respondents disagree and rest 2% of them strongly disagree with this

TABLE 12: 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

CHART12:LACK OF MANAGEMENT COMMITMENT

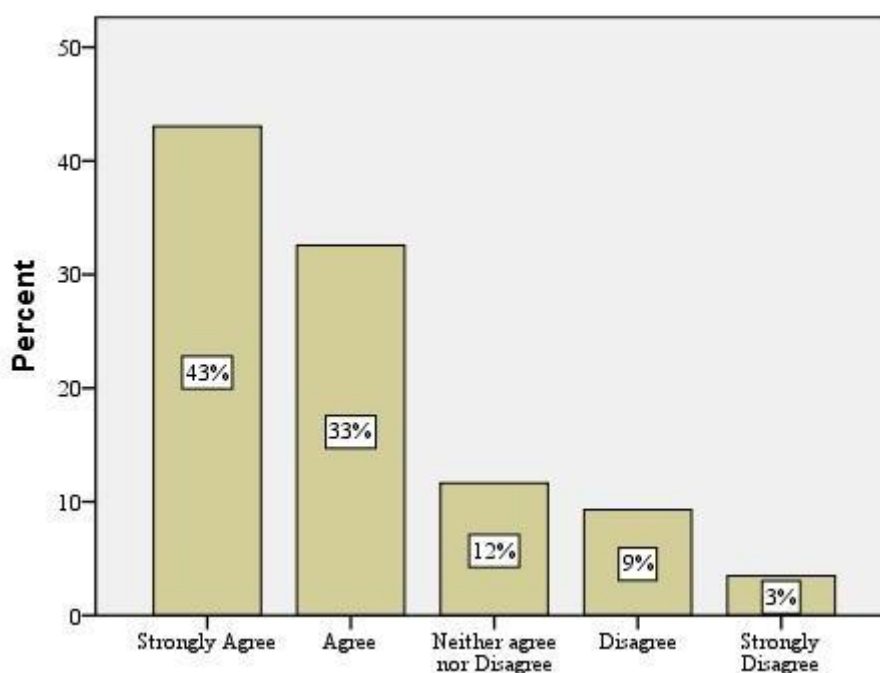


Interpretation: 45% respondents strongly agree that lack of management commitment is the barrier in effective evolution of ERP, 33% of them agree with this, 13% of the respondents are neutral towards this, 7% respondents disagree and rest 2% of them strongly disagree with this

TABLE 13: SATISFACTION WITH THE STATUS QUO

OPTIONS	FREQUENC Y	PERCENTAGE (%)
Strongly Agree	37	43.0
Agree	28	32.6
Neither agree nor disagree	10	11.6
Disagree	8	9.3
Strongly Disagree	3	3.5
TOTAL	86	100

**CHART 13: SATISFACTION WITH
THE STATUS QUO**

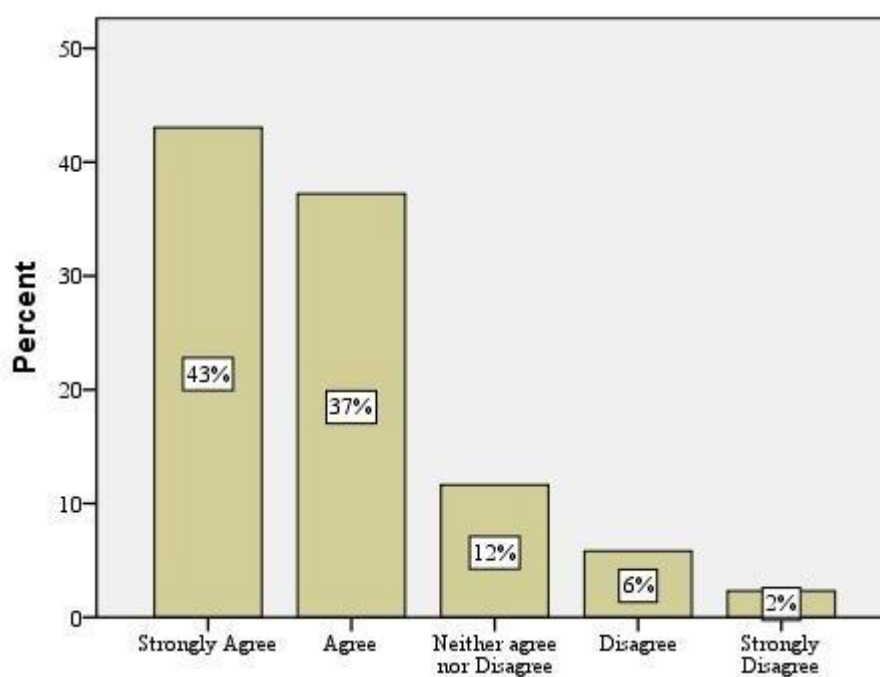


Interpretation: 43% respondents strongly agree that satisfaction with the status quo is the barrier in effective evolution of ERP, 33% of them agree with this, 12% of the respondents are neutral towards this, 9% respondents disagree and rest 3% of them strongly disagree with this

TABLE 14: NO OR POORLY DONE NEEDS ANALYSIS

OPTIONS	FREQUENCY	PERCENTAGE (%)
Strongly Agree	37	43.0
Agree	32	37.2
Neither agree nor disagree	10	11.6
Disagree	5	5.8
Strongly Disagree	2	2.3
TOTAL	86	100

CHART 14: NO OR POORLY DONE NEEDS ANALYSIS

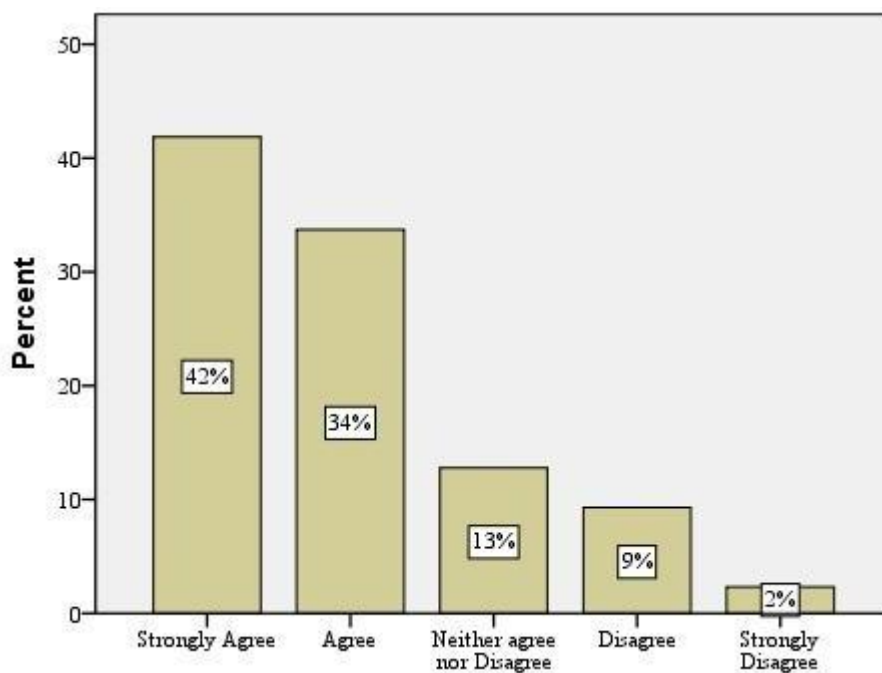


Interpretation: 43% respondents strongly agree that no or poorly done needs analysis is the barrier in effective evolution of ERP, 37% of them agree with this, 12% of the respondents are neutral towards this, 6% respondents disagree and rest 2% of them strongly disagree with this

TABLE 15: LACK OF COMMUNICATION

OPTIONS	FREQUEN CY	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
TOT AL	86	100

**CHART 15: LACK OF
COMMUNICATION**



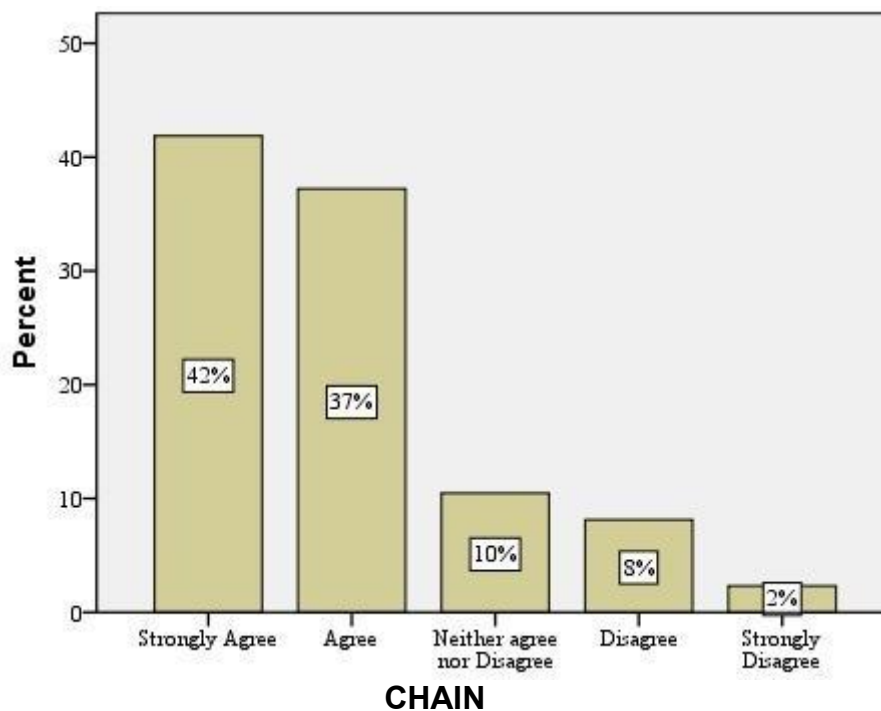
Interpretation: 42% respondents strongly agree that lack of communication is the barrier in effective evolution of ERP, 34% of them agree with this, 13% of the respondents are neutral towards this, 9% respondents disagree and rest 2% of them strongly disagree with this

Need for integrated ERP

TABLE 16: 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

CHART 16: INCREASE THE VISIBILITY IN SUPPLY

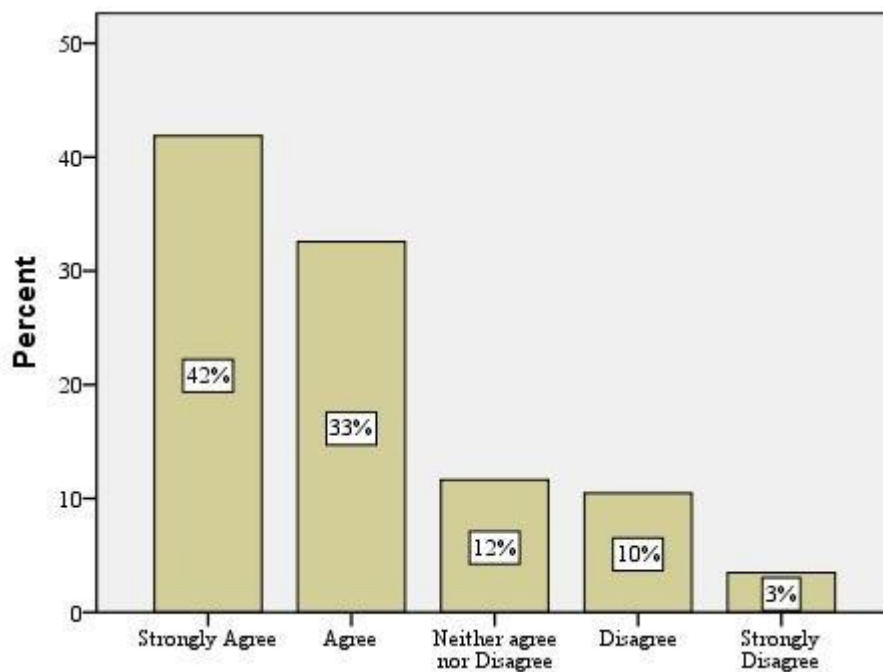


Interpretation: 42% respondents strongly agree that increase the visibility in supply chain is the need for an integrated ERP, 37% of them agree with this, 10% of the respondents are neutral towards this, 8% respondents disagree and rest 2% of them strongly disagree with this

TABLE 17: CORRECT VALUATION OF STOCK

OPTIONS	FREQUENCY	PERCENTAGE (%)
Strongly Agree	36	41.9
Agree	28	32.6
Neither agree nor disagree	10	11.6
Disagree	9	10.5
Strongly Disagree	3	3.5
TOTAL	86	100

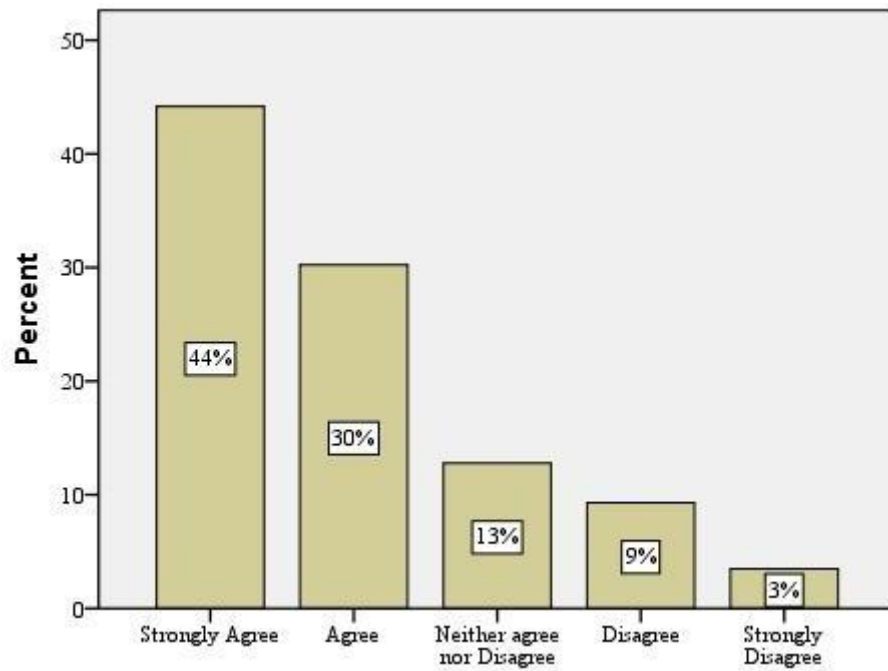
CHART 17: CORRECT VALUATION OF STOCK



Interpretation: 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

TABLE 18: 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

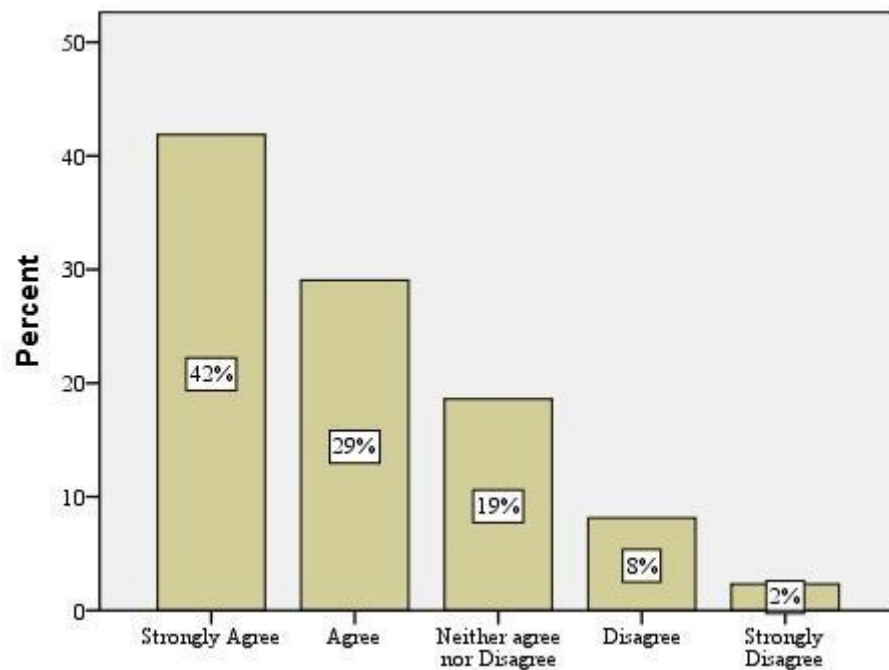
CHART 18: EFFECTIVE TRACKING

Interpretation: 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

TABLE 19: 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

TABLE 19: 24 X 7 SUPPORT

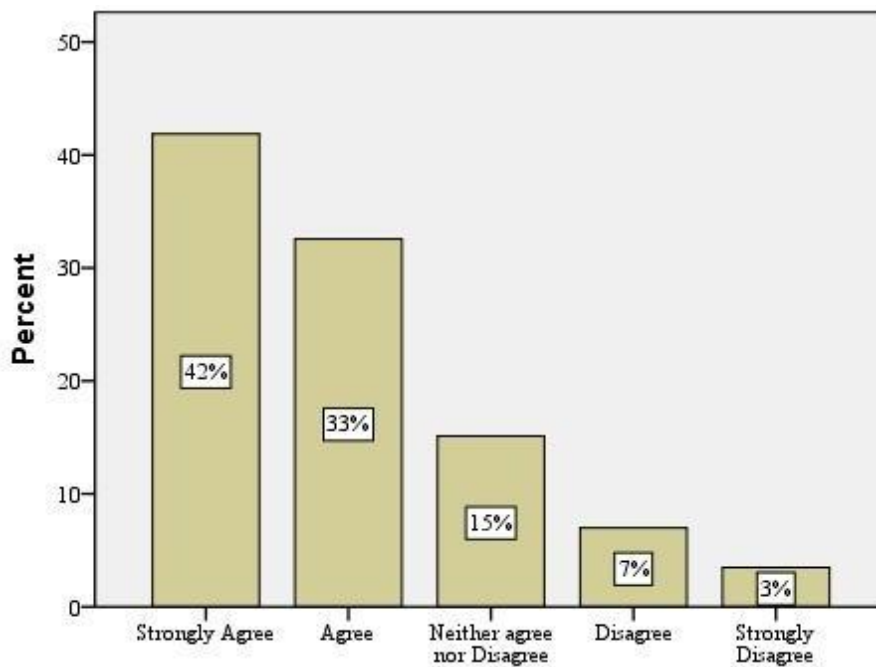


Interpretation: 42% respondents strongly agree that 24 x 7 support is the need for an integrated ERP, 29% of them agree with this, 19% of the respondents are neutral towards this, 8% respondents disagree and rest 2% of them strongly disagree with this.

TABLE 20: TIME SAVING

OPTIONS	FREQUENCY	PERCENTAGE (%)
Strongly Agree	36	41.9
Agree	28	32.6
Neither agree nor disagree	13	15.1
Disagree	6	7.0
Strongly Disagree	3	3.5
TOTAL	86	100

CHART 20: TIME SAVING



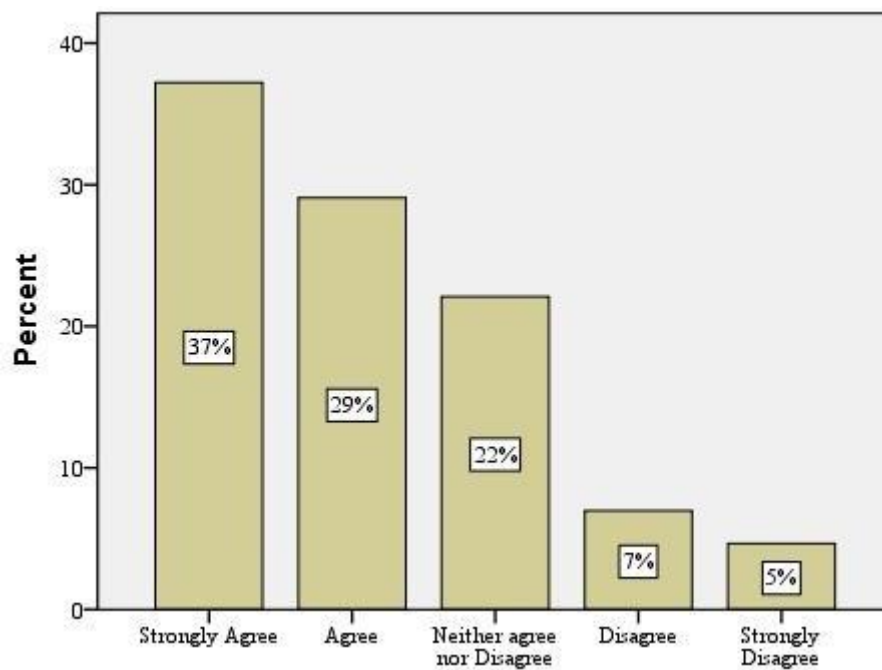
Interpretation: 42% respondents strongly agree that time saving is the need for an integrated ERP, 33% of them agree with this, 15% of the respondents are neutral towards this, 7% respondents disagree and rest 3% of them strongly disagree with this.

Benefits of integrated ERP

TABLE 21: 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

CHART 21: COMPETITIVE ADVANTAGE

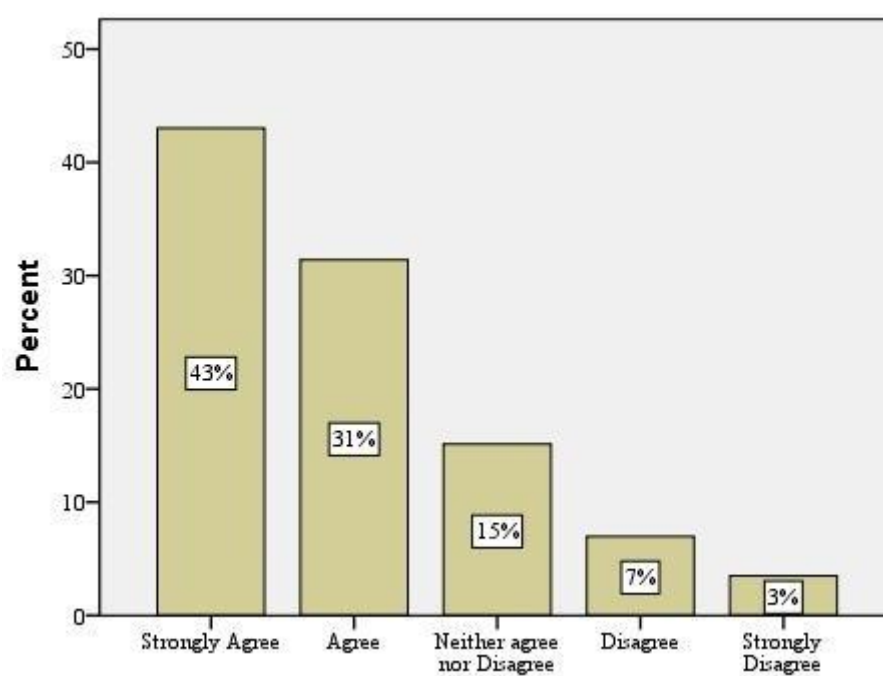


Interpretation: 37% respondents strongly agree that gaining competitive advantage is the benefit of integrated ERP, 29% of them agree with this, 22% of the respondents are neutral towards this, 7% respondents disagree and rest 5% of them strongly disagree with this.

TABLE 22: 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

CHART 22: COMPLIANCE TO STANDARDS

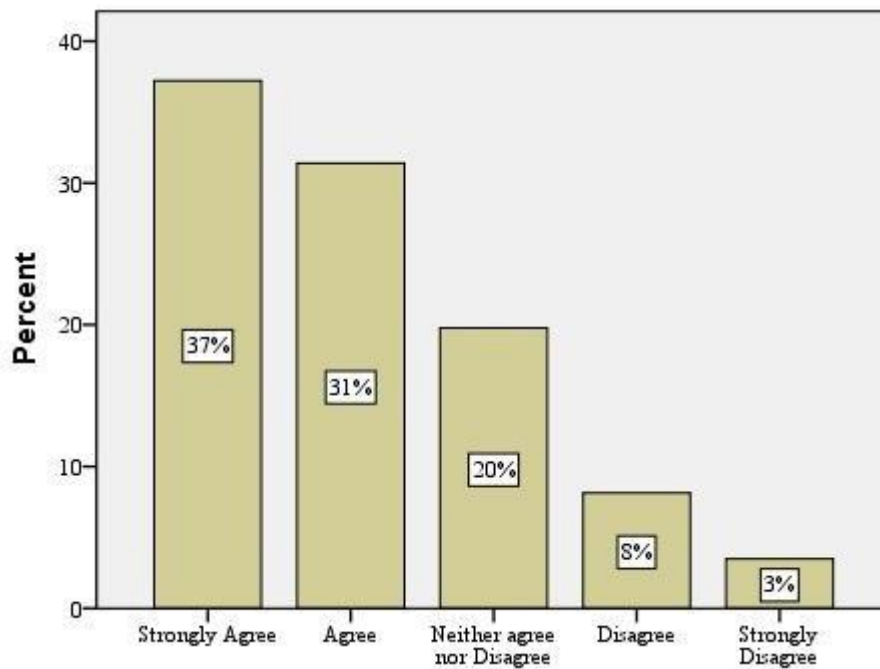


Interpretation: 43% respondents strongly agree that compliance to standards is the benefit of integrated ERP, 31% of them agree with this, 15% of the respondents are neutral towards this, 7% respondents disagree and rest 3% of them strongly disagree with this.

TABLE 23: 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

CHART 23: COST EFFECTIVENESS

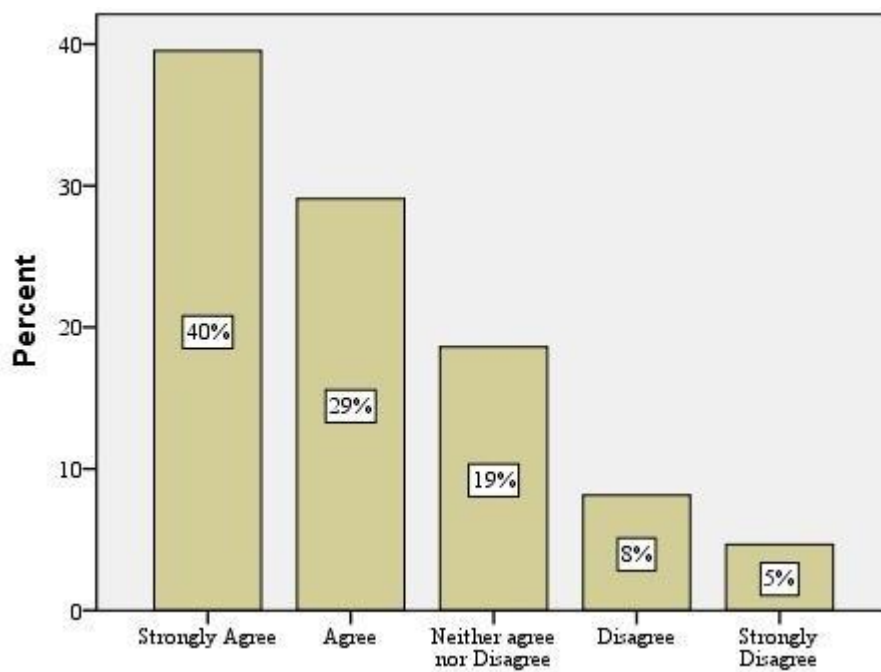


Interpretation: 37% respondents strongly agree that cost effectiveness is the benefit of integrated ERP, 31% of them agree with this, 20% of the respondents are neutral towards this, 8% respondents disagree and rest 3% of them strongly disagree with this.

TABLE 24: 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

CHART 24: REDUCTION OF PILFERAGE AND DAMAGES

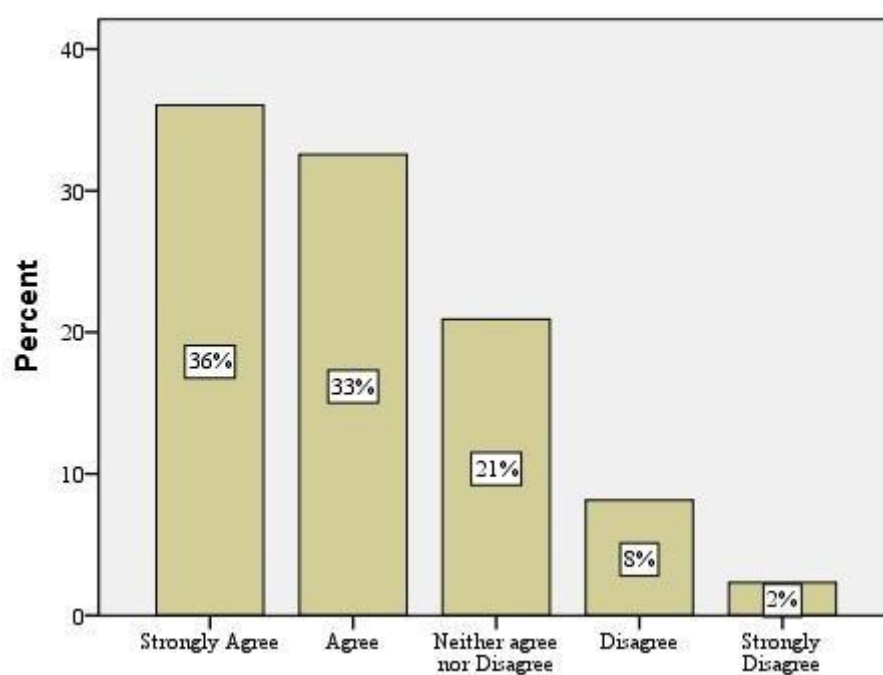


Interpretation: 40% respondents strongly agree that reduction of pilferage and damages is the benefit of integrated ERP, 29% of them agree with this, 19% of the respondents are neutral towards this, 8% respondents disagree and rest 5% of them strongly disagree with this.

TABLE 25: EFFECTIVE TRANSPORTATION CONTROL

OPTIONS	FREQUENCY	PERCENTAGE (%)
Strongly Agree	31	36.0
Agree	28	32.6
Neither agree nor disagree	18	20.9
Disagree	7	8.1
Strongly Disagree	2	2.3
TOTAL	86	100

CHART 25: EFFECTIVE TRANSPORTATION CONTROL



Interpretation: 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.

4.2 CHI-SQUARE TEST

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

To find the reliability of the collected data Chi-square test has to be conducted, required hypothesis is the null hypothesis

Null Hypothesis:

H_0 = There is no dependency between age of the respondents and their opinion no orpoorly done needs analysis as a barrier in effective evolution of ERP

Alternate Hypothesis:

H_1 = There is a dependency between age of the respondents and their opinion no or poorly done needs analysis as a barrier in effective evolution of ERP

Age * Poorly Crosstabulation								
			Poorly					Total
			Strongly Agree	Agree	Neither agree nor Disagree	Disagree	Strongly Disagree	
Age	Below 20 Years	Count	0	1	0	0	0	1
		Expected Count	.4	.4	.1	.1	.0	1.0
	21-30 Years	Count	18	17	6	5	1	47
		Expected Count	20.2	17.5	5.5	2.7	1.1	47.0
	31-40 Years	Count	16	7	3	0	0	26
		Expected Count	11.2	9.7	3.0	1.5	.6	26.0
	Above 40 Years	Count	3	7	1	0	1	12
		Expected Count	5.2	4.5	1.4	.7	.3	12.0
Total		Count	37	32	10	5	2	86
		Expected Count	37.0	32.0	10.0	5.0	2.0	86.0

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.832 ^a	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 count less than 5. The minimum expected count is .02.			

Interpretation: Chi square value of χ^2 (12) 13.832. Significance 0.312 at 5% level of significance, table value 13.832 is > 0.312 and the accepted Null Hypothesis. Hence there is 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 ONE WAY ANOVA TEST

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

Null Hypothesis:

H_0 = There is no statistically significant relationship between education of the respondents and the utilization of resources as a challenge in present ERP process

Alternate Hypothesis:

H_1 = There is a statistically significant relationship between education of the respondents and the utilization of resources as a challenge in present ERP process

Descriptives								
Utilization								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Non Graduate	2	1.50	.707	.500	-4.85	7.85	1	2
Diploma	25	2.04	1.172	.234	1.56	2.52	1	5
Graduate	51	2.12	1.089	.152	1.81	2.42	1	5
Post Graduate	8	1.25	.463	.164	.86	1.64	1	2
Total	86	2.00	1.085	.117	1.77	2.23	1	5

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 the table that shows the output of the ANOVA analysis and we have no statistically significant difference between our group means. We can see that

4.4 CRONBACH ALPHA

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

Case Processing Summary			
		N	%
Cases	Valid	86	100.0
	Excluded ^a	0	.0
	Total	86	100.0
a. Listwise deletion based on all variables in the procedure.			

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

Item Statistics			
	Mean	Std. Deviation	N
Age	2.57	.744	86
Gender	1.03	.185	86
Education	2.76	.650	86
Experience	1.79	.972	86
Income	2.01	.819	86
Excess	1.92	1.043	86
Wastage	1.99	1.046	86
Utilization	2.00	1.085	86
MIS	1.92	1.031	86
Packaging	1.92	1.020	86

Technology	1.94	1.067	86
Commitment	1.88	1.034	86
Satisfaction	1.98	1.116	86
Poorly	1.87	.992	86
Communication	1.97	1.068	86
Visibility	1.92	1.031	86
Valuation	2.01	1.132	86
Effective	1.98	1.127	86
Support	2.00	1.074	86
Timesaving	1.98	1.084	86
Competitive	2.13	1.135	86
Compliance	1.97	1.089	86
Costeffective	2.09	1.102	86
Reduction	2.09	1.154	86
Transportation	2.08	1.054	86

Summary Item Statistics							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	1.992	1.035	2.756	1.721	2.663	.082	25
Item Variances	1.030	.034	1.332	1.298	39.116	.092	25
Inter-Item Covariances	.587	-.120	1.083	1.203	-9.015	.213	25
Inter-Item Correlations	.511	-.236	.961	1.197	-4.066	.169	25

Scale Statistics			
Mean	Variance	Std. Deviation	N of Items
49.79	378.073	19.444	25

Interpretation: 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. 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

Null Hypothesis: Ho = There is no statistically significant relationship between gender of the respondents and their opinion on providing 24*7 support as a need for integrated ERP in the warehouses of a logistic company

Alternate Hypothesis: H₁ = There is a statistically significant relationship between gender of the respondents and their opinion on providing 24*7 support as a need for integrated ERP in the warehouses of a logistic company

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. (2-tailed)	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 is clear that the significance (0.026) is lesser than 0.05. A value less than .05 means that the variability in the two conditions is different. That

the scores in one condition vary too much more than the scores in the second condition. Put scientifically, it means that the variability in the two conditions is statistically significantly.

4.6 : CORRELATION CO-EFFICIENT

A Pearson product-moment correlation was run to determine the relationship between experience of the respondents and their opinion on compliance to standards as a benefit of integrated ERP

Null Hypothesis: H_0 = There is no statistically significant relationship between experience of the respondents and their opinion on compliance to standards as a benefit of integrated ERP

Alternate Hypothesis: H_1 = There is a statistically significant relationship between experience of the respondents and their opinion on compliance to standards as a benefit 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 data showed a violation of normality, linearity or homoscedasticity. There was a negative correlation between experience of the respondents and their opinion on compliance to standards as a benefit of integrated ERP, which was not statistically significant ($r = -0.051$, $n = 86$, $p = 1$). The Pearson correlation coefficient, r , is -0.051 and that is not statistically significant the significance level is 0.181 ($p = .181$), which is more than 0.05 , therefore, there is no statistically significant relationship between education of the respondents and the utilization of resources as a challenge in present ERP process

CHAPTER 5

FINDINGS, SUGGESTIONS & CONCLUSION

5.1 FINDINGS OF THE STUDY

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

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

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

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

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

Challenges in ERP

✓ 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

✓ 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

✓ 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

✓ 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

✓ 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

Barriers in effective evolution of ERP

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

✓ 45% respondents strongly agree that lack of management commitment is 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 disagree with this

✓ 43% respondents strongly agree that satisfaction with the status quo is 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 disagree with this

✓ 43% respondents strongly agree that no or poorly done needs analysis is 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 disagree with this

✓ 42% respondents strongly agree that lack of communication is 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 disagree with this

Need for integrated ERP

✓ 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

✓ 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

5.2 SUGGESTIONS & RECOMMENDATIONS

Let us discuss the specific steps that I recommend one should take to implement ERP in SME.

 Work with account consultant to finalize Chart of Accounts first. Chart of accounts must ensure compliance with laws of the land. If this is not finalized then any changes to this results in having to change data which is error prone.

 Start next on Fixed Assets of the company. Get all existing FAs entered in the system using right depreciation schedule permitted by law. Provide customer with couple of reports that give them information they need to know that the information got entered properly.

 Once accounts are set up, start purchasing module implementation. Sub divides the implementation into multiple flows (e.g. Import, Local purchase etc...). Trying to implement complete purchasing cycle is treacherous due to the amount of activity that needs to be done. You want to select certain flows, get those delivered and then move to the next flows.

 After purchasing, next should be inventory. Once material management is addressed, major pain areas for most of the businesses in SME will be addressed. There are very few SME that struggle with managing sales. That is a good problem that they know how to handle. Inventory implementation will include QA at the time of receipt, material rejection etc.

 Manufacturing should be handled last. This is for the simple reason that in the SME sector, there are very few companies who optimize Manufacturing while implementing ERP. In other words, there are no major gains to be had

when one implements ERP for the first time. ERP in manufacturing starts showing results once the organization is used to ERP and data residing in ERP.

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

✚ **Demonstrate the product**

5.3 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 imperative for them to look for means of responding to the dynamic markets. ERP systems have become the most common IT strategy for most large companies. SME 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. 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 issues to be considered there are certainly many more which the authors hope to find in their further study. The conceptual model of ERP implementation in SME

BIBLIOGRAPHY

- ✚ Boykin, R.F. (2001), "Enterprise resource-planning software: a solution to the return material authorization problem", *Computers in Industry*, Vol. 45, pp. 99- 109.
- ✚ E.M. Shehab, M.W. Sharp, L. Supramaniam and T.A (2004), : Enterprise resource planning, An integrative review "Spedding Medway School of Engineering, University of Greenwich, ChathamMaritime, UK.
- ✚ Garg Venkitakrishnan, (2006). "ERP Concepts and Practice", Prentice HallIndia.
- ✚ Markus, M.L., Tanis, C. and van Fenema, P. (2000), "Multi-site ERP implementations", *Communications of the ACM*, Vol. 43 No. 4, pp. 42-6.
- ✚ Holland, C. and Light, B. (1999), "A critical success factors model for ERPimplementation", *IEEE Software*, Vol. 16 No. 3, pp. 30-6.
- ✚ Sirigindi.C (2000), "Knowledge management in implementing ERP for SMEs",
- ✚ Stensrud, E. (2001), "Alternative approaches to effort prediction of ERP projects", *Information and Software Technology*, Vol. 43, pp. 413-23.
- ✚ Levy Margi, Powell Philip, (2006), "Strategies for growth in SMEs: The role of Information and Information Systems", *Information Processing and Management: an International Journal*. Vol 42
- ✚ Munjal.R, (2006), 'An Integrative Framework for the Assimilation of Enterprise Resource Planning Systems: Phases, Antecedents, and Outcomes'. *Journal ofComputer Information Systems*, Vol. 44, (3), spring 2006, pp 81-90.

QUESTIONNAIRE

1. Name: _____

2. Address: _____

3. Phone/Mobile: _____

4. Email ID: _____

1. Age:

- ☐ Below 20 Years
- ☐ 21-30 Years
- ☐ 31-40 Years
- ☐ Above 40 Years

2. Gender:

- ☐ Male
- ☐ Female

3. Qualification:

- ☐ Non Graduate
- ☐ Diploma
- ☐ Graduate
- ☐ Post Graduate

4. Experience:

- ☐ Below 5 Years
- ☐ 6-10 Years
- ☐ 11-15 Years
- ☐ Above 15 Years

5. Income

- ☐ Less than 2 Lakhs
- ☐ 2-3 Lakhs
- ☐ 3-4 Lakhs
- ☐ More than 4 Lakhs

Q.No	Challenges in ERP	SA	A	N	DA	SDA
6	Excess stocks					
7	Wastage of process					
8	Utilization of resources					
9	Lack of proper MIS to monitor the process					
10	Packaging Issues					

Q.No	Barriers in effective evolution of ERP	SA	A	N	DA	SDA
11	Technology implementation					
12	Lack of management commitment					
13	Satisfaction with the status quo					
14	No or poorly done needs analysis					
15	Lack of communication					

Q.No	Need for integrated ERP	SA	A	N	DA	SDA
16	Increase the visibility in supply chain					
17	Correct Valuation of Stock					
18	Effective tracking					
19	24 x 7 support					
20	Time saving					
Q.No	Benefits of integrated ERP	SA	A	N	DA	SDA
21	Competitive advantage					
22	Compliance to standards					
23	Cost Effectiveness					
24	Reduction of pilferage and damages					
25	Effective Transportation control					

26. Suggestion

