



*Journal of Advances and  
Scholarly Researches in  
Allied Education*

*Vol. VIII, Issue No. XV,  
July-2014, ISSN 2230-7540*

## **A STUDY OF ERPS ADOPTION IN A SMALL & MEDIUM-SIZED ENTERPRISE**

AN  
INTERNATIONALLY  
INDEXED PEER  
REVIEWED &  
REFEREED JOURNAL

# A Study of ERPS Adoption in a Small & Medium-Sized Enterprise

Geeta Rani

M.Phil. in IGU Meerpur, Rewari

**Abstract – Enterprise Resource Planning:** systems or the ERP systems refer to the software packages that integrate all the data and the related processes of an organization into a unified Information System (IS). An ERP system uses a central database that holds all the data relating to the various system modules. In order to achieve a seamless integration, an ERP system uses multiple hardware and software components. ERP packages are heavily used by larger in Small and Medium Enterprises. SMEs and implementation of Enterprise Resource Planning (ERP) systems have tended to concentrate on their decision-support capabilities rather than their transactional and record-keeping aspects. This paper explores connections between ERP systems and decision support based on the adoption by Small and Medium Enterprises. It offers new insights into the important objectives are (and should be) the factors influencing an enterprise to adopt ERP and decision-support objectives. It provides insights into the decision-support benefits of ERP systems. The study also examines relationships between the importance of ERP implementation and its benefits for SMEs.

**Keywords:** Benefits; Decision support; Enterprise resource planning; SMEs; ERP systems; Impacts; Objectives.

-----X-----

## INTRODUCTION TO ERP

**Enterprise Resource Planning** systems or the ERP systems refer to the software packages that integrate all the data and the related processes of an organization into a unified Information System (IS). An ERP system uses a central database that holds all the data relating to the various system modules. In order to achieve a seamless integration, an ERP system uses multiple hardware and software components. ERP packages are heavily used by larger retail chains. Designed to facilitate the administration and optimization of internal business processes across an enterprise, ERP packages have become the competitive tool for most large retail organizations. An ERP software uses a single database that allows the different departments to communicate with each other through information sharing. ERP systems comprise function-specific components that are designed to interact with the other modules such as the Order Entry, Accounts Payable, Accounts Receivable, Purchasing, Distribution etc.



## OBJECTIVES OF ERP SOFTWARE

1. To achieve the potential growth rate.
2. Increase the return on investment.
3. Availability of the relevant information on regular basis.
4. Better decision support system.

5. Scalability of the business operations.
6. To reduce working capital requirement.
7. To improve customer service.
8. To improve direct labour productivity.
9. To reduce purchase cost.
10. To reduce obsolescence.
11. To improve quality of life.



## MODULES OF ERP

- **Core Modules-**
- **Non-Core Modules-**

### CORE MODULES-

- ✓ Accounts receivable— where the company enters money received
- ✓ Accounts payable— where the company enters its bills and pays money it owes
- ✓ General ledger— the company's "books"
- ✓ Billing— where the company produces invoices to clients/customers
- ✓ Stock/Inventory— where the company keeps control of its inventory
- ✓ Purchase Order— where the company orders inventory
- ✓ Sales Order— where the company records customer orders for the supply of inventory
- ✓ Cash Book— where the company records collection and payment

### NON CORE MODULES-

- ✓ Debt Collection— where the company tracks attempts to collect overdue bills (sometimes part of accounts receivable)
- ✓ Electronic payment processing
- ✓ Expense— where employee business-related expenses are entered
- ✓ Inquiries— where the company looks up information on screen without any edits or additions
- ✓ Payroll— where the company tracks salary, wages, and related taxes
- ✓ Reports— where the company prints out data
- ✓ Timesheet— where professionals (such as attorneys and consultants) record time worked so that it can be billed to clients
- ✓ Purchase Requisition— where requests for purchase orders are made, approved and tracked

## ERPS FOR SMES

There are several factors that are influencing the ERPs market for SMEs. With most of the large organizations already adopting ERP systems worldwide, SME's too are finding it a competitive necessity to follow the large enterprises. SMEs want to reap the same benefits that large enterprises have had through adopting ERP systems. These benefits include a gain in operational, analytical and strategic advantage in the market by achieving standardization and automation of information, processes and tasks. The advent of powerful, scalable and relatively inexpensive hardware, and increasing availability of the application hosting

(Remote hosting) of the software services have been motivating the SMEs to upgrade their systems and technologies. Global competition for some of the high-tech niche market SMEs is forcing them to update their old legacy systems with a modern internet-enabled real-time enterprise-wide information system. Thus updating their information technologies and systems become a necessity for SMEs to survive in this global market place. As important stakeholders in the supply chain networks, SMEs are required to upgrade their systems and technologies and meet the information requirements of their larger partners.

On the market side, with a view to expand their market, large ERP software vendors such as SAP, Oracle and Microsoft have started focusing their attention to SMEs. With more than 70% of the Fortune 1000 companies having an enterprise system, the ERP systems market for large enterprises has reached a saturated point. In order to meet the SMEs requirements, software vendors have modified their

standard products and started offering pre-configured low cost solutions to SMEs. ES software vendors such as SAP are now offering low cost preconfigured business process component based solutions with industry specific capabilities as extensions. By allowing SMEs to choose particular component initially and then facilitating a gradual build-up of the system, they are able to offer SMEs a faster ramp-up, reduced implementation time and efforts and importantly lower initial and ongoing costs. SAP's All-in-One and Business One, Oracle's e-Business Works, Data systems' Workflow ERP, Microsoft's Great Plains and Navision, and NetSuite are some of the products increasingly pushed into the SMEs market by the software vendors.

With very limited number of SMEs so far adopting these enterprise-wide systems, very little is known about the issues these companies faced in adopting and implementing these ERP systems and the benefits they have so far realised in their post-implementation phase.

### **COMPUTERIZED INTEGRATED ERP**

The use of computers in the preparation and analysis of accounts is a major achievement of the electronic data processing system. Most of the modern, medium and large size business organizations have installed computers for maintenance of accounts. Software for computerized accounts are readily available in the market based on single entry as well as double entry system, the basic principles of which are the same type of books of accounts are maintained like cash books, ledgers, etc. However, one can develop his own software depending upon his specialized requirements.

### **ADVANTAGES OF INTEGRATED ERP**

- ✓ Multiplicity of activities are eliminated once vouch of a transactions is entered all other accounting operations are automatically done, like posting into ledgers, totals, preparation of trail balance, final accounts, various type of reports etc.
- ✓ Proper budgeting can be done without much additional work.
- ✓ Alteration and addition in transactions are easy.
- ✓ Instant view of all books of accounts, vouchers and final accounts.
- ✓ Besides maintaining books of accounts computers can also be used for several other applications such as payroll, cost records,

generating letters / reminders / configuration statements for customers ,suppliers etc

### **WHAT TO LOOK FOR IN "INTEGRATED ERP" SOFTWARE**

With all the accounting software available, it's hard to know which program is the best fit for your business finances. Some of the points given below that help us to select the software-

#### **✓ Ease of Use-**

We look for finance software that is simple to install, set up, and understand. The best accounting programs make navigating intuitive, so you never have to guess where you are or what to do next.

#### **✓ Business Modules-**

Business modules are categories required to successfully maintain your business finances (such as Accounts Payable and Accounts Receivable). Does the accounting software have all the basic accounting modules you'll need? All the bells and whistles of the software aren't relevant if the basics aren't covered. Will the finance software grow with your company? We look for accounting software that lets you grow and customize your system to fit your individual business needs.

#### **✓ Reporting Categories-**

Consider accounting software that offers a wide range of reports. You should be able to print at least one kind of report for every module. Reporting features are often built into each section, but it's better if you can create reports from anywhere in the program. Customizable reports save you time; look for accounting software that will let you set your own criteria. With detailed financial reporting, you can analyze what is and isn't working for your business.

#### **✓ Help Documentation-**

Look for email and phone support; toll-free phone and live support, online help is a bonus. Online, we look for indexed help topics that can be searched easily. You'll want quick access for both technical help and accounting help for your software. Accounting software companies should have qualified people (both technicians and accountants) answering these tough questions.

With the right accounting software, you will be able to manage your company's books quickly and easily.

#### **✓ Implementations-**

In many cases, implementation (i.e. the installation and configuration of the system at the client) can be a bigger consideration than the actual software chosen when it comes down to the total cost of ownership for the business. Most midmarket and larger applications are sold exclusively through resellers, developers and consultants. Those organizations generally pass on a license fee to the software vendor and then charge the client for installation, customization and support services. Clients can normally count on paying roughly 50-200% of the price of the software in implementation and consulting fees.

Other organizations sell to, consult with and support clients directly, eliminating the reseller.

## INTEGRATED ERP IMPLEMENTATION LIFE CYCLE

ERP implementation life cycle divided into 4 main phases (with each phase having numerous tasks)

1. Selection Phase
2. Implementation Phase
3. Training Phase
4. Expanding (Post-Implementation) Phase

## OBJECTIVES OF STUDY

The objective of this research study is to analyze the influence of enterprise systems implementation in a small and medium-sized enterprise. Characteristics of enterprise systems that include organizational integration, standardization of processes, best practice processes, flexibility and adoptability and others are used as a framework to analyze the impact of enterprise systems in SMEs. Therefore the research questions are:

- What is the influence of implementing an enterprise system in a small and medium-sized enterprise?
- What factors influence a medium-sized enterprise's decision to adopt an ERP system and how?

## RESEARCH METHODOLOGY

Research methodology is a way to systematically solve the problem. It may be understood as a science of studying how research is done scientifically. In it we study the various steps that are generally adopted by a researcher in studying his research problem along with the logic behind them.

## RESEARCH DESIGN

A framework or blueprint for conducting the research project. It specifies the details of the procedures necessary for obtaining the information needed to structure and/or solve research problems. Typically, a research design involves the following components, or tasks:

- (A) Define the information needed.,
- (B) Design the research.,
- (C) Specify the measurement and scaling procedures.
- (D) Construct and present a questionnaire or an appropriate form for data collection.
- (E) Specify the sampling process and sampling size.
- (F) Develop a plan of data analysis.

## DATA COLLECTION

### Primary Data

The **Primary Data** are those, which are collected afresh and for the first time, and thus happened to be original in character.

- Observation.
- Personal Interviews.
- Telephonic interviews.
- Questionnaires.
- Schedules.

### Secondary Data

The **Secondary Data** are those which have already been collected by someone else and which have already been passed through the statistical tool. Methods of collection of Secondary data

- Newspapers.
- Magazines
- Journals
- Internet
- Libraries
- Old records.



## **FACTORS INFLUENCING THE ADOPTION**

There are several external as well as internal forces that are potentially influencing an SME's decision to adopt ERP systems. For example, major customers of an SME who are typically powerful in their supply chain contexts, and/or an SME within a large global conglomerate may force SMEs to upgrade their information management practices and adopt modern systems and technologies for doing business with them and/or part of their enterprise and supply chain integration strategies. Several e-Procurement initiatives of large enterprises forced the SMEs to enter the purchasing information directly into their customer's information system through Internet and facilitate transactional efficiencies for the large enterprises. Similarly on the sales side also, some large business enterprises have asked their smaller customers to place orders online and allowed traceability and visibility of their orders and demand information. Uncertainty about the environment, growth opportunities in the global marketplace and competition are other factors that influence SMEs decision to adopt or no ERP systems. If an SME is operating in an uncertain and volatile environment where its business viability and continued sustenance is in doubt, it may not go in for any significant long term investments on information technologies. A summary of the factors influencing the adoption decision and relevant references are presented below.

### **EXTERNAL**

- Uncertainty about environment
- Competition and opportunities for growth  
External pressure (from bigger supply chain partners or headquarters)
- Changing requirements of external (markets, customers, suppliers and economy)
- Information management practices and willingness to adopt modern systems & technologies

### **INTERNAL**

- Resource constraints (costs and time); limited financial, technical and managerial capabilities
- Risks in the adoption of IT/IS – reorganization of processes and costs,
- Recognised need to build operational capabilities and IT competence, for integration across the SME and beyond; for improving info visibility and decision making, reducing operational/transactional costs.

- Nature and complexity of internal processes, production systems predisposition to process integration, process and software fit;
- Organisational issues – change management, ability to manage the system (post-implementation)
- Challenges in evaluation and selection of software, implementation and post-implementation efforts

## **CHALLENGES FOR SMEs WITH ENTERPRISE SYSTEMS**

In spite of such changes in the market offerings and reduced total cost of ownership offered by many of the ERP software vendors as discussed above, adoption of ERP systems by the small and medium sized enterprises is still challenging. Some of the challenges are discussed here. Resources are always limited for an SME in general. It is always challenging for the SMEs to find adequate resources to do a careful study of available enterprise systems and to plan and execute a low risk implementation. The problems of implementing ERP systems and making them work have all been well documented in the literature, and there are many failures even for large firms that have abundant resources. In addition to this, assessing the benefits, costs and risks of IT investments has also been a challenge to SMEs. While the costs tend to occur when the new software solutions are implemented, its benefits would start appear in future with all the associated risks. Estimating and realizing the benefits, estimating the direct and indirect costs, and identification of risk and its management are more complex and challenging in the context of ERP systems implementation. Direct and indirect costs of such implementations are often underestimated even in large ERP implementations and lead to over budget in many ERP implementation projects. Studies in the past noted that a large number of enterprises could not even properly estimate the indirect costs. With the finances generally limited in SMEs, it becomes further challenging and difficult to commit investment for information technology innovations without sufficient evidence of its potential benefits and proper assessment of its risks to the business operations and continuity. Implementing an enterprise system requires some (5 to 10%) customization whether the organization is small or large.

## IMPACT OF ERP MODULES FOR SMES

**The Impact ERP Software addresses the following SME needs:**

SUITES	MODULES				
Finance	Accounts	Taxations	Banking	Loans	Costing
Purchase	Comparison & Order	Procurement	Sales Contract	Import	
Sales	Marketing	Pricing	Opportunity	Order Process	Export
Inventory	Product	Stores	Logistics	Asset Management	Internal Branch
Manufacturing	Production	Process	Excise	Outsourcing	
HRM	Human Resources	Recruitment	Payroll	Work Flow	Individual Calendar
CRM	Contact Book	Marketing Campaign	Maintenance & Services	Mail Management	Customer Support
SCM	Supply Chain	Order & Supply Management		Distribution & Transportation	
Project	Planning	Staff & Resource Management		Execution	
On Demand	Customization	Quality	Corporate Services	Security & Utility	Analytics

## WHAT IS IN THE SOFTWARE “ERP” OR HOW “ERP” WORKS?

When we use ERP then first we make ledger groups then ledger account, brand setup.....etc.

### LEDGER GROUP SETUP-

A ledger group is a combination of ledgers for the purpose of applying the functions and processes of General Ledger Accounting to the group as a whole. In ledger group setup we add the group (account) name

This option allows you to set up to two Reporting Groups for your General Ledger Accounts. These Account Groups should represent the further grouping or division of your Income, Expenses, Capital, Assets and Liabilities, i.e. Financial Categories or the main classification of the Accounts in the Accounting Equation.

The five main groups of the Financial Categories are usually further divided into Account Groups. e.g.

- ✓ **Income** - Income from normal business activities, e.g. sales, consulting, etc. and Other Income received such as interest, etc.
- ✓ **Expenses** - Expenses incurred during normal business activities, e.g. rent, cleaning, etc. and Expenses of a Capital nature.
- ✓ **Capital** - The contribution/s or investment from the owner/s. The groups you may wish to enter would depend on the type of ownership

for the business, e.g. Company, Close Corporation, Partnership or Sole Proprietorship.

- ✓ **Assets** - Fixed Assets (Immovable Assets) and Current Assets (Movable Assets)
- ✓ **Liabilities** - Long-term Liabilities and Current Liabilities.

You may create any number of groups to meet your requirements. These Account Reporting Groups are used to structure the layout of the [Balance Sheet](#) and [Balance Sheet](#). You may also select to print [General Ledger Transactions](#) Reports only for those accounts which are linked to a specific reporting group, e.g. Fixed Assets, Current Assets, etc.

You will be able to select any of the Accounts Reporting Groups 1 or 2, if you have set it up on the following menu options:

- Edit - Accounts - Bank, General Ledger and Tax (Account Types).
- Reports -
  - General Ledger
  - [Chart of Accounts \(Account Listing\)](#)
  - [Budget Performance](#)
  - [General Ledger Account Movements](#)
  - [Trial Balance](#)
  - [Income Statement](#)
  - [Balance Sheet](#)

**Ledger accounts-** Separate page in a ledger which [records](#) increases and decreases in each [balance sheet item](#), [classified](#) under [assets](#), [liabilities](#), or [owners' equity](#). Also called an [account](#). In ledger account setup we add account name and the group of the account with full address.

The ledger account is where all accounting transactions are posted in a double entry system using debits and credits for each transaction. An additional column to the far right can keep a running total of activity in the account, similar to your check book.

## CUSTOMER SETUP

It helps in maintaining customer database with all the required information which will be used for transactions and can be retrieved in the form of the lists for promotional use.

We add here the name of the particular customer, customer id, opening balance, address, city, phone no, mobile no etc. so that the company can make future relations with the customers. This data also helps in ascertaining the information about customer's transactions with the company.

**Brand setup-** Helps in identifying different brands available in the store. Brand setup is an important tool of SBS. In this we add the brand name id and concerned supplier. We can create a new supplier too. There are other options like: open, delete, back to the previous brand, next, and find the particular brand in the list.

## Store setup-

It creates different stocking locations like floors, godowns or departments. This information is further used in the inventory management like there storage, usage and need of particular items in the particular godowns.

## ADVANTAGES OF ERP

There are a number of powerful advantages to Enterprise Resource Planning. It has been used to solve a number of problems that have plagued large organizations in the past. At the same time, it is not without a number of disadvantages. Being able to weigh the two will allow a company to decide if this solution will properly meet their needs.

Installing an ERP system has many advantages - both direct and indirect. The direct advantages include improved efficiency information integration for better decision-making, faster response time to customer queries, etc.

The indirect benefits include better corporate image, improved customer goodwill, customer satisfaction and so on. Some of the benefits are quantitative (tangible) while others are non-quantitative (intangible).

Tangible benefits are those measured in monetary terms and intangible benefits cannot be measured in monetary terms but they do have a very significant business impact.



**TANGIBLE BENEFITS:**

- Improves the productivity of process and personnel
- Lowering the cost of products and services purchased
- Paper and postage cost reductions
- Inventory reduction
- Lead time reduction
- Reduced stock obsolescence
- Faster product / service look-up and ordering saving time and money
- Automated ordering and payment, lowering payment processing and paper costs

**INTANGIBLE BENEFITS:**

- Increases organizational transparency and responsibility
- Accurate and faster access to data for timely decisions
- Can reach more vendors, producing more competitive bids ;
- Improved customer response
- Saves enormous time and effort in data entry ;
- More controls thereby lowering the risk of mis-utilization of resources
- Facilitates strategic planning
- Uniform reporting according to global standards

**CONCLUSION**

The ability of enterprise resource planning (ERP) to integrate processes and information and to deliver automation and consistent execution of processes across the enterprise is important not only to larger corporations, but also for small and medium sized enterprises (SMEs). Carefully comparing the challenges and potential benefits, increasing availability of cost-effective ES software solutions in the marketplace, and the imperative information needs of their own businesses, SMEs are increasingly implementing pre-configured enterprise systems solutions. Successful adoption, implementation and exploitation of enterprise systems in SMEs context is dependent upon factors such as suitable fit between ERP software solution and their processes,

heterogeneity of their legacy systems and technologies, complexity of business operations, and the extent of standardization and integration of information and processes achieved after implementation.

**REFERENCES**

- ➔ [www.cio.com/article/40323/ERP-Definitions](http://www.cio.com/article/40323/ERP-Definitions)
- ➔ [www.sap.com/solutions/business-suite/crp/index](http://www.sap.com/solutions/business-suite/crp/index)
- ➔ [www.business.gov.in/industry](http://www.business.gov.in/industry)
- ➔ <http://msme.gov.in>
- ➔ Vikalpa-The Journal of Management, IIM, Ahmedabad