**Online Enterprise Resource Planning**

# Abstract

One of the best ways to avoid error in the system is to turn to Ai and online Enterprise Resource Planning where the error in any form would mean in a collapse of the entire structure. A detailed and planned structure of data in a workspace that can be accessed by all the required departments reduces miscommunication and increases productivity. In any business, the cooperation of the different departments is crucial and failing which the business will definitely take a hit. Previously the whole system consisted of software which required a dedicated hardware and a skilled technician to handle the machine and input the data and make the required changes. But, cloud based software is the new rage and online ERP will prove beneficial not only in terms to reduce additional costs but also people tasked with entry of data are not required to be an expert in AI and ERP. Overall productivity will increase and scope for error or loss of data can be easily prevented.

# Table of Contents

[Introduction 4](#_Toc19197574)

[Research Aim 4](#_Toc19197575)

[Research Objectives 4](#_Toc19197576)

[Research Questions 4](#_Toc19197577)

[Literature Review 5](#_Toc19197578)

[Methodology 7](#_Toc19197579)

[Discussion 9](#_Toc19197580)

[Conclusion 10](#_Toc19197581)

[Reference 11](#_Toc19197582)

# Introduction

Enterprise Resource Planning or ERP is at the core a business transformation technology. It incorporates all the basics of the business be it raw materials list, invoices, human resource sections, marketing and sales and everything that deals with the services provided by the business. This might sound similar to the CRM module but the key difference likes in the fields that both these software caters to. While a CRM is, essentially, client and customer management and relationship building software, ERP maintains the company’s structure and database making all the necessary details available to the departments as per the requirement. The entry of data and updating is done only once and from a single point. While CRM is basically cloud based, ERP is traditionally software that is prepackaged like Tally. And that is understandable given that the system was in use since 1960s. It was then an inventory maintaining software, keeping stock of the materials present and ones that needs to be ordered. The whole system had to be manually updated every time.

## Research Aim

To implement the use of online ERP as a cloud based solution with more flexibility.

## Research Objectives

The objective of this research is to provide a detailed study on the following:

* The growth of ERP into cloud based software
* To analyze the effect of ERP over the business modules.
* The effect of AI on accounting.
* To analyze the effectiveness of online ERP for small businesses.

## Research Questions

While pursuing this topic, various questions arises which are critical in terms of a practical approach to the ERP system. But, the most important questions that need to be addressed are:

* Can this single software be the backbone of a company?
* What are the benefits of opting for AI powered online ERP system?
* How important is a common and centralized database?
* How effective is online ERP with reference to long term investment?

# Literature Review

The modern day ERP came into implementation after a series of upgradations and additions to cater to all the activities of the back office section that includes HR, Accounting and Finances, Budgets and Inventory. Each ERP was programmed to cater to the requirement of the business. In fact, ERP often comes with a CRM system for businesses whose front office plays a key role – like retail or B2B. But the problem arose when the human factor was still very much the prominent feature of the operation of the software not to mention the additional costs that comes in form of investments in dedicated hardware and technician who is an expert in handling that ERP system. This is where online ERP will be beneficial. Not only will it remove the costs of any software, but the offsite database is maintained by trained professionals without your business having to pay any charge.

One of the major innovations for IT field is the continuous development of the ERP system to accommodate more freedom in terms of use and application (Seethamraju, 2015) and this claim is further supported by researchers speaking of the benefits of incorporating more sections like cost structure and organizational structuring Madanhire, Mbohwa (2016) along with the traditional inventory check. The whole idea behind the development of the ERP system was to streamline businesses and minimize the margin of error. In fact, it is stated multiple times that the ERP system is ideal in terms of constant improvement and upgradation to accommodate the need of the day. While the initial creation of the system was restrictive in the sense that companies that want to get the software had to install a separate, and costly, hardware. And, to operate that hardware a trained technician had to be hired.

A centralized database is beneficial for every business owner – small or big. The incorporation of all businesses to contribute to the data and utilize the updated database will prove beneficial for the said businesses (Kocaaga, Ervural, Demirel, Zaim, 2018). Having the option to operate business via smartphones not only increases productivity but time restrictions are made fluid. Yet, many companies have complained of critical failures in the implementation of the ERP system (Saade, Nijher, 2016) and that can be traced to various factors but none are caused because of the software itself. In fact, most of the problems arise because the consultancy has been incorrect or the BPR has not been completely and successfully reengineered. The software solution is offered by companies or vendors. There are specific solutions and generalized software and choosing the one that will be beneficial for the business is where the make or break point lies (Costa, Ferreira, Bento, Aparicio, 2016) especially when people think that one size fits all is true for ERP. This factor has been seen affecting, adversely, SMEs and that discourage many small business owners from taking the advancing plunge into the ERP world. While proper implementation will mean profit increase and more avenues to expand in terms of business decisions, the first steps will always be about the immense shift of the whole structure of the business. Factors like hierarchy purpose, impact roles and scope for continual change has to be considered and changed or integrated accordingly. Once this is successfully achieved and the vendors are aware of the needs of the business and are capable of providing ideal ERP solutions then it is possible to have a sustainable and efficient operating business with a guaranteed profit after 3 years of implementation (Rajasekar, Suresh, 2017).

This increased profit comes from multiple facets. The primary being better communication improves overall work progress which helps each department to keep track of their own progress along with the department that is directly connected with them. Collaboration amongst multiple businesses also increases work flow while reducing additional charges that a company incurs when dedicating another wing to that team. As pointed out by Costa, Ferreira, Bento, Aparicio, 2016 via their research that has provided positive reviews from uses who have reaped the benefits of proper implementation and utilization of online ERP.

# Methodology

ERP has been around since the 1960s and IT boom has cause tremendous changes and upgradations to the existing system. Now companies from across the world can access data for their company or share their findings with other collaborators as per the need. But arguments have been made that the expensive software solutions are best suited for big businesses because small to medium businesses do not have that many sectors to focus on. Yet, proper implementation can benefit any business – not just financially but also as an honest business.

In order to understand the usage of ERP and the need for more companies to join the Online ERP system research has been conducted. A research methodology is drawn and followed. This methodology includes:

1. Inductive Approach where fresh theories are proposed and data is collected keeping to the questionnaire which are drawn based on those hypothesis. This is a fresh approach and unless the stipulated data is collected, drawing conclusions is not probable. In fact this method is ideal for researchers opting for Qualitative Analysis as fresh and unbiased data can be obtained.
2. Deductive Approach is based on preexisting data and researchers have to analyze, reanalyze and check their theories against the said data. This approach offers a solid ground for affirming or adjusting the core questions that the researcher has and helps further their research via surveys and interviews based on these findings.

For this research purpose the deductive approach is appropriate as the data pertaining to implementation of ERP already exists.

Speaking of deductive approach, two methods are possible for data collection. The data collected or analyzed are crucial for the progress of the research. Not only does the data offers the researcher the scope to better their theories but also helps them understand the complexities of the existing system. These are:

1. Primary data which comes from fresh surveys, interviews and experiments. These first hand data has to be collected, analyzed, shifted through and then reassembled in order to progress with the research.
2. Secondary data are the one that already exists and in many cases forms the backbone of the primary data collection questionnaires. The collection is vast and careful reading and analyzing is requires when selecting the data which will be the basis of the research.

For our research purpose we will be using the secondary data analysis.

Manufacturing industries benefits greatly with the proper implementation and the costs are managed greatly along with more effective work flow. There are four main components of a manufacturing firm. The first deals with the warehouses and material management where inventories of raw materials are checked. The second is the operations section where the sales and marketing is dealt with. In the data collected, it is seen that with the implementation of ERP, the company completes the billing process within 2 hours whereas non – implementation requires 23 hours. The same improvement is seen in accounts payable section and invoice checking. The checks are done within seconds as compared to hours taken to process and check the data manually.

Survey data shows the positive impact of implementation of ERP where firms have seen significant improvement on their investment returns, assets turnovers and return on assets. While the findings does not show any significant improvement in the financial sector, but it can be safely stated that profits are incurred via cost cutting on longer man hours and meeting all the deadlines. And it is seen that over a steady span of 3 years the impact of said reforms does start showing in the company accounts. The research also shows that smaller firms stand to gain more by the implementation on online ERP as compared to larger firms. With the integration of more sectors and industries, the benefits of online ERP will be felt even more profoundly as data collected and delivered will be more comprehensive.

With the integration and sharing of data from a central database is the core of Online ERP, questions of ethics arises. And such concerns are not unfound given the level of corruption and hacking techniques that are abundant. But, the concern arises not because of the software itself but because of individual discretion and better firewall development.

# Discussion

The role of the ERP in the integration of IT and commerce was crucial and this fact can be testified by the fast growth of the technology and the advances it made within a span of decades from being just an inventory checklist to managing production and finally incorporating various back office tasks along with CRM integration and laying the foundation for the software to evolve to cloud based computing solution. The whole idea behind the implementation and upgradation of the ERP to online cloud – based system is not only pertaining to security but also minimize costing for the company – which maximizes profit.

Apart from this, being regulated by a common database helps not an upgraded list but access to real time global data helps the departments who are responsible for the development and progress of the business, namely the Research & Development team, the Marketing tem and the Sales team. Businesses are at the turning point in terms of understanding the importance of having access to a large amount of data in relation to the growth of their business. A common database also improves customer management and services which can make outsourcing tasks easier. The company does not have to dedicate separate time, space and allowances for an entire team of people who will be answering questions and solving issues regarding the products and services.

Automating finance also plays a crucial role in maintaining a steady customer base while ensuring employee loyalty. This step also directly influences the profit of the company. With automated invoicing, procure to payment processes or leads to cash processes being automated, the system achieve a greater work rate as compared to manual inputs and referencing. This enables businesses to avail to discounts on invoices or take up more work. Accounts payable once gets automated, the invoices are cleared within 3 to 4 days. This increase the chances of availing the discounts offered by the dealers and keep a good track record.

This speed is especially beneficial for small businesses to make an impact and get more businesses. Transparency and speed are the two main pillars of all business relationships. Making a commitment and sticking to it and keeping the capital fluid amongst businesses is the backbone of the whole business industry. The option to choose the business plan that fits the need of the SME is a plus as the tools and software upgradation grows with the business.

# Conclusion

Switching to online ERP from the traditional ERP is not only low on the cost but also ensures high security and better handling of the data that is fed by the company. The main work is done by the AI which not only gathers the information provided by all the departments but also processes it and prepares detailed yet concise reports for the perusal and approval of the department head. Not only does this minimize the risk of incorrect data entry but it also improves the speed and productivity of the company. One of the biggest benefactors of the online ERP system will definitely be the Accounting system who has to process multiple invoices and that is a lengthy task. Often many businesses offer early payment discounts to their clients where they state that if the invoice is cleared before the deadline then the company will get a discount of 20%. Manual processing of invoices requires at least 2 weeks and the deadline passes by but with automated invoice manager the task is completed in 3 days. The leaner and much stronger option of cloud based ERP will ensure more productivity in terms of innovation and offers greater scalability.

# Reference

Altamony, H., Al-Salti, Z., Gharaibeh, A. and Elyas, T., 2016. The relationship between change management strategy and successful enterprise resource planning (ERP) implementations: A theoretical perspective. International Journal of Business Management and Economic Research, 7(4), pp.690-703.

Chaudhary, S. (2016). Ethics in ERP Implementation: A Critical Review of Some Factors. International Journal of Engineering and Management Research (IJEMR), 6(4), 193-196.

Costa, C.J., Ferreira, E., Bento, F. and Aparicio, M., 2016. Enterprise resource planning adoption and satisfaction determinants. Computers in Human Behavior, 63, pp.659-671.

Dr. D. Rajasekar and Dr. R. Suresh, A Study on Post Implementation Benefits of ERP in Manufacturing. International Journal of Civil Engineering and Technology, 8(12), 2017, pp. 451-464.

Kocaaga, A.S., Ervural, B.C., Demirel, O.F. and Zaim, S., 2018, August. Analysis of the Relationship Between Enterprise Resource Planning Implementation and Firm Performance: Evidence from Turkish SMEs. In The International Symposium for Production Research (pp. 724-736). Springer, Cham.

Madanhire, I., & Mbohwa, C. (2016). Enterprise resource planning (ERP) in improving operational efficiency: Case study. Procedia CIRP, 40, 225-229.

Saade, R.G. and Nijher, H., 2016. Critical success factors in enterprise resource planning implementation: A review of case studies. Journal of Enterprise Information Management, 29(1), pp.72-96.

Seethamraju, R., 2015. Adoption of software as a service (SaaS) enterprise resource planning (ERP) systems in small and medium sized enterprises (SMEs). Information systems frontiers, 17(3), pp.475-492.

Shatat, A.S., 2015. Critical success factors in enterprise resource planning (ERP) system implementation: An exploratory study in Oman. Electronic Journal of Information Systems Evaluation, 18(1), p.36.