

**LITERATURE REVIEW ON THE OPPORTUNITIES AND CHALLENGES OF ERP IN
THE SUPPLIER INTEGRATION OF SMES.**

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Abstract

Enterprise resource planning (ERP) is one of the technologies which helps any organisation move towards modernisation and globalisation. The main reason behind the organisations moving towards ERP Implementation is to achieve integration of the various processes and procedures in the organisation. In doing so the organisations achieve centralisation and integration of the information which helps them to have better decision making and functioning of the organisation. Since ERP provides the integration functionality, it helps in coordination with their Suppliers. Every organisation faces issues in the Supplier integration and the better way of achieving integration is attained through the implementation of ERP in the organisation. It helps the suppliers and the organisation in the mutual participation in various decision- making activities. It provides various strategic and operational procedures in achieving the better integration of their SME suppliers towards the organisation. This helps in quicker decision making and in satisfaction of the customers. This research paper will focus on the literature review on the opportunities and challenges faced by the SMEs through supplier integration process.

Key words: Enterprise Resource Planning, Supply chain management, Integration, Decision Making, SMEs.

Introduction:

Organisations depend on different types of Information systems to manage and control their day to day business activities and help them in better decision making process. Enterprise resource planning software is a means of technology based solution which helps the industries of all magnitudes to restructure and computerize business activities. ERP helps in the centralisation of the data and acts as a data hub for the various business activities which can be used by several departments within the organisation. ERP also helps the organisation to help them in value addition and to increase the visibility of the organisation to compete at a global level. ERP aids in the integration of the various internal integration of the various departments of the organisation. The next important task which every organisation focuses on is the integration of their supplier partners to achieve better performances in the business. The supplier partners to the organisations could be from SME sector levels too. Hence it is mandatory for the small scale businesses to also implement ERP system in their organisation. The implementation of ERP in the small scale enterprises would help them to develop better governance opportunities and lead them to globalisation of the business.

Small enterprises face certain substantial challenges to be selected as the vendors for larger customers due to the implementation of the technological features in their businesses. Due to the excessive cost associated with the adoption and implementation of the technology, the small vendors are not able to tap the bigger market potential and compete at a global level.

Recently the focus on the supply chain management has grown widely due to the various innovative methods adopted by the organisations to satisfy the needs of the customers and to achieve the competitive advantage. Organisations device various strategies for the planning of the resources when they are into the E-commerce based businesses. To make the process more efficient and effective ERP helps in the automatizing of the organisational functions like inventory management and control, procurement of raw materials, supply of the finished goods, cash & receivables

management, project management. Through the characteristic feature of ERP which enables integration with the suppliers, the above mentioned functionalities are made possible with the information sharing with the suppliers. This enables the supply chain partners to coordinate together and help in minimising the transactional cost minimisation activity.

Literature Review:

Enterprise Resource Planning is one of the technology which helps to integrate all the business activities of the organisation inside and outside of the enterprises. To achieve the enterprise wide integration, organisation requires the sharing of information with their vendors outside of the organisation and help them in better supply chain process. Organisations focus more on the Logistics and supply chain management when organisations move to global market. The organisations can have a competitive advantage by focussing on the implementation of well- developed supply chain management linkages through various SCM activities like raw material purchases, information sharing, information technology sharing etc. Li et. Al (2006).

Vonderembse et al. 1999, in his study of ERP and SCM integration has claimed that the performance of the suppliers has a significant impact on the quality of the product, cost of the product, time of delivery. Also it helps in bringing in a positive impact on the competitiveness and the profitability of any organisation. The quality of utilisation of the resources can be increased by having a better strategic collaboration with the suppliers of the organisation. This strategic partnership with the suppliers helps the organisation to have a long term relationship leading to better product quality and competitive advantage.

Jones (1998), explained that the important factors towards the achievement of the long term relationship between the suppliers and the organisations can be achieved through information sharing. Also he has added that, the information shared with the supplier partners should be precise, well-timed, adequate and reliable. These characteristic features of a well-defined supply chain can help in the reduction of the demand and supply uncertainty issues.

Holmberg (2000) states that the organisations should consider this information shared through the ERP system as a most important strategic resource which would help the organisation in providing notification regarding the delays and the disruptions which might happen in the supply chain process.

Objective:

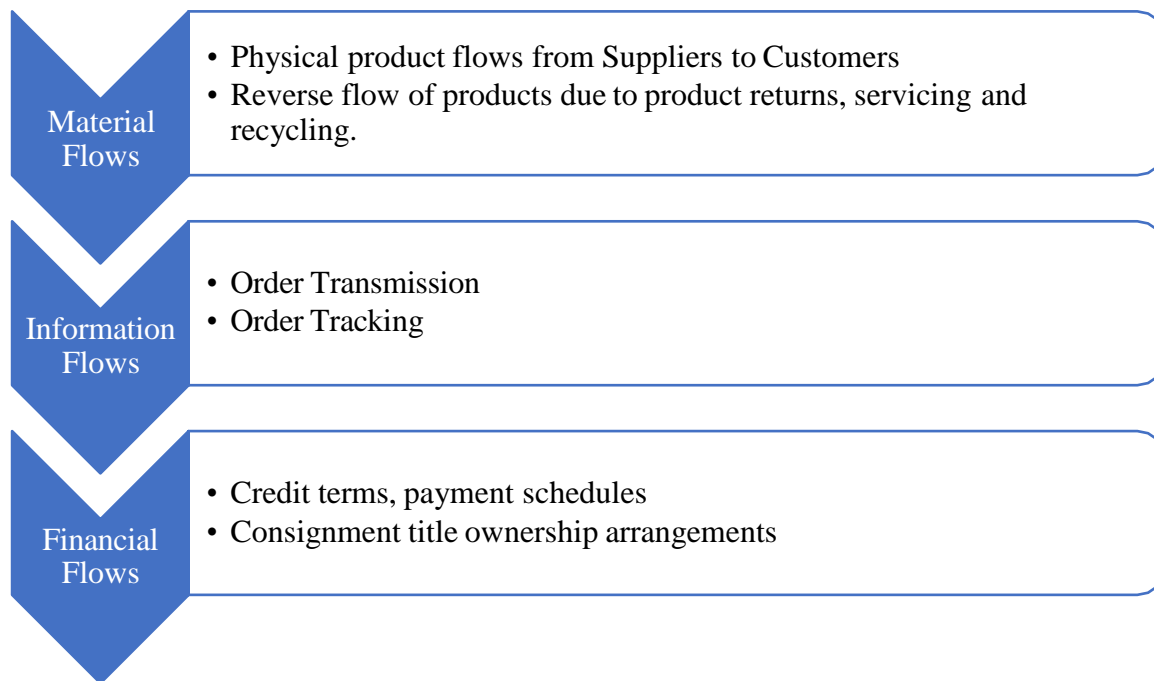
The objective of this research is to study the opportunities and challenges which the SMEs face through supplier integration of ERP.

Research Design:

In this research paper we would be using the exploratory and explanatory type of research design since we are trying to understand the basic knowledge about ERP and the SCM integration in the SMEs. Also we would be using the explanatory type of the research to explain the advantages and disadvantages of the ERP and SCM integration with the SME sector.

Supply Chain Management Network:

A supply chain network consists of the dominant players like Suppliers, Manufacturers, Distributors, Retailers and customers. The operational activities between these players are classified into three different levels Viz. Flow of Materials, Flow of Information and Flow of Finances.



Strategies adopted by ERP Vendors to manage SMEs:

The vendors of ERP have collected detailed information regarding the limitations and the challenges faced by small and medium enterprises when their ERP system is being implemented in their industries. To achieve and meet the requirements and specifications given to the ERP vendor from the organisational side, the ERP vendors offer a well customised scaled down version of their software applications which they deliver to the larger organisations. The most important strategy adopted by the ERP vendors while scaling down the ERP functionalities for the SMEs are lesser complexity, affordable cost and lesser implementation times.



The other strategies adopted by ERP vendors while designing the ERP software solution for SMEs are as follows:

Compact Solutions:

The ERP vendors develop ERP system which can be specifically used for the particular industry well before including all the menus which might be required for each and every functionality. It also consists of the pre-configured data, software catalogues and report generation functionality for the documentation purposes. Few ERP vendors have been successfully using this strategy to serve the SME based customers.

Flexible Pricing:

ERP vendors provide flexible pricing policy to their SME based market customers. They allow the SMEs to buy the core functionality modules as an immediate solution and the requirement from the SME customers. They later provide the add on modules/features with minimum amount of licenses based on the customer specification. This option allows the SMEs to invest on a secured basis with their affordable budgeted amount.

One more additional feature offered by the ERP vendors to the SMEs are providing financial services to them for few years through a well-defined monthly instalment.

Implementation Methodology

The implementation stage of the ERP software in the SME organisations is taken up on a fast track mode in order to reduce the implementation costs, time and the effort. The vendors have a well-defined implementation process for the module implementation, rigorous training for the employees of the organisation in order to attain faster knowledge transfer and also the post implementation support to the SMEs. This step by step devised implementation strategy helps the SME to be well acquainted to the new system and adapt to the changes.

Hosting Options

The ERP vendors provide the hosting options to the SMEs, which includes the facility of providing the infrastructure to run the ERP system at a comparatively lesser cost when compared to constructing and maintaining their own infrastructural needs. This hosting function helps the SMEs in reduction of the implementation costs and the other special resources required for the maintenance of ERP. This feature helps the ERP vendors to attract their SME customers by claiming that the hosting option of the infrastructure from their end would prevent the loss of data and help them in making the data available 24/7.

More Specialized Functionalities

The ERP vendors design special features and solutions to the SMEs to accommodate the various verticals of the business and also to adapt to the innovative functionalities of the business. They provide additional features for horizontal integration of the SME business functionalities even after post implementation.

Open Source ERP

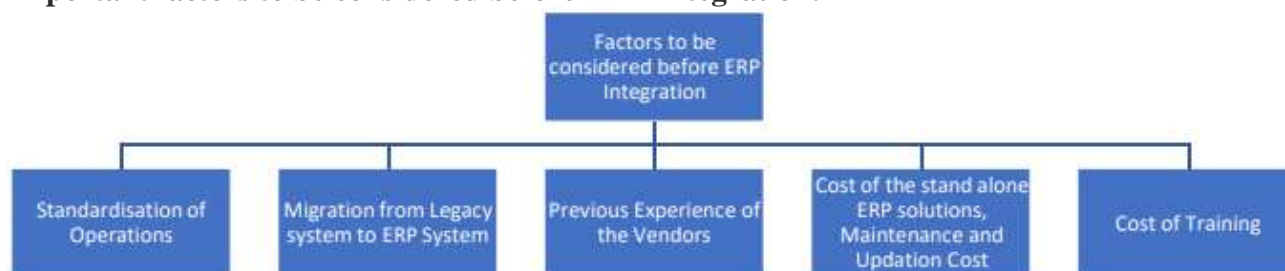
There are number of open source ERP solutions which are available to the SMEs. These open source ERP solutions do not provide all the features and functionalities as provided by the commercially available ERP solutions. These ERP solutions are available at free of cost or very cheaper prices. The implementation of these ERP solutions can be achieved at a faster and easier manner as they do not include all the required features of the SMEs. SMEs can use the open source ERP for a stipulated time to understand the ERP implementation process and can later switch over to the commercial version of the ERP solution.

Marketing of the products through Direct and Indirect Selling Methods

The vendors of ERP market and sell their product directly and expand their worldwide network of

SME solution centers. This strategy helps them to lessen the burden of their channel partners towards the configuration issues and help them focus on the delivery of the software solution to the SMEs on time.

Important factors to be considered before ERP Integration:



Standardisation of Operations:

While giving the specifications to the vendor detailing the processes before customisation of the ERP system, certain things need to be verified from them. Details like whether the processes which could not be integrated through ERP system, could be run on an isolation basis and provide the same functionalities.

Migration from Legacy system to ERP system:

There are several hic ups which the organisation would face while moving from the legacy system to the ERP system. During this transition time, there may be some down time which would occur and hamper the business activities. So, the organisations should consider this feature and device action plans to control them.

Previous Experience of the Vendors:

It is necessary to check the previous experience of the vendor in the similar type of industry and know their performance in the successful implementation of the ERP in that organisation. This would help the organisation to understand the difficulty level of the implementation process of the ERP system in the organisation.

Cost of the standalone ERP solutions, Maintenance and Updation Cost:

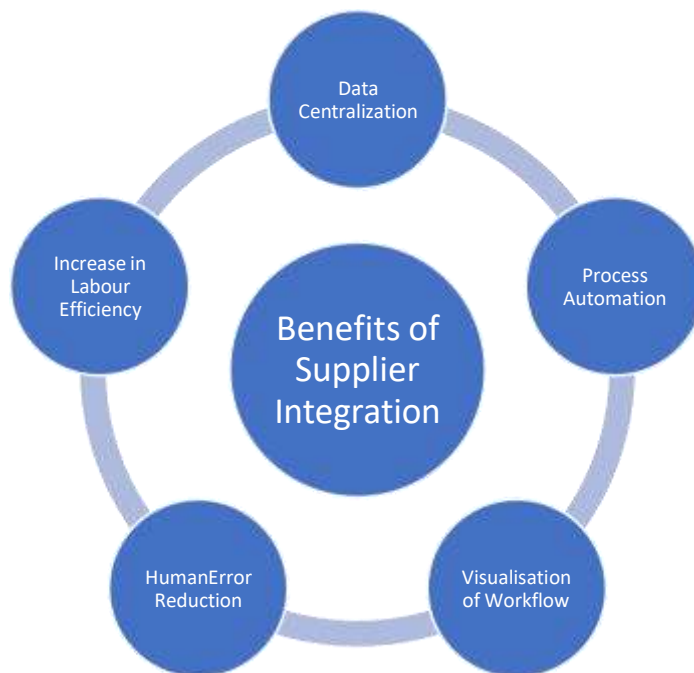
The organisation should consider the cost of the standalone module implementation in the organisation based on the requirements and also include the cost which would occur down the line for the updation of the software solutions and the maintenance of the software.

Cost of Training:

The organisation should take into account the cost of training which would occur while moving from the legacy system to the ERP system. The users require explicit training to handle the system and get to trained on how to work on them.

Benefits of SME integration through ERP:

There are several positive aspects which the organisation experiences through the ERP Supplier integration which helps in the development of the bottom-line activities of the organisation. The benefits which the organisation achieves through the supply chain integration through ERP are as follows:



Data Centralization:

This is one of the major advantages of the ERP integration which helps the organisational data to be made available at a centralized level, by providing the access to the data to all the functionalities of the organisation. This feature of the centralization of the data helps in reduction of the time, as one need not have to wait for the others to provide them the data. This helps the managers in quicker decision making.

Process Automation:

The automation of the business processes helps in streamlining the activities of the business, thereby reducing the lead time of manual entry of the data. This automation hence reduces the time for the task completion and provides better support by generating several reports for the management and governance purposes.

Visualization of Workflow:

Visualization of the workflow of the business process activities are another added benefit of the ERP integration processes. Due to the centralization of the data, one can visually see the status of the various activities which helps one to see what their peers are actually working upon. This can help an employee to prioritise their tasks and work accordingly.

Human Error Reduction:

Since ERP helps in the business automation, the error which might occur during the work flow is reduced on a large scale. When the errors which happens during the business process are reduced, it helps the organisation to achieve a competitive edge.

Increase in Labour Efficiency:

ERP integration helps in automation of business, due to which the large part of an employee time is saved from doing repeated data entry work at various levels hence making the employee available to perform other essential duties and tasks. Due to the reduction in performing the redundant work of an employee, the efficiency of the employee increases leading to the increase in the productivity of the employee and organisation.

Challenges of ERP Integration:

Even though there are number of benefits which the organisation enjoys through ERP integration, there are certain challenges too. A statistical data states that 60% of the ERP implementation in the organisation fails due to several reasons and lead to the failure in the achievement of the goal of any organisation. There are several reasons why the ERP implementation fails in any organisation.

ERP System Integration requires support of the organisational Strategy:

Selection of the ERP system vendor is the most important decision which the organisation is required to make on a effective basis. The modules provided by the ERP vendor should go in line with the organisational goals and strategy. If it does not meet the requirements then it would lead to the failure in implementation of ERP.

Maintenance and Updating of ERP:

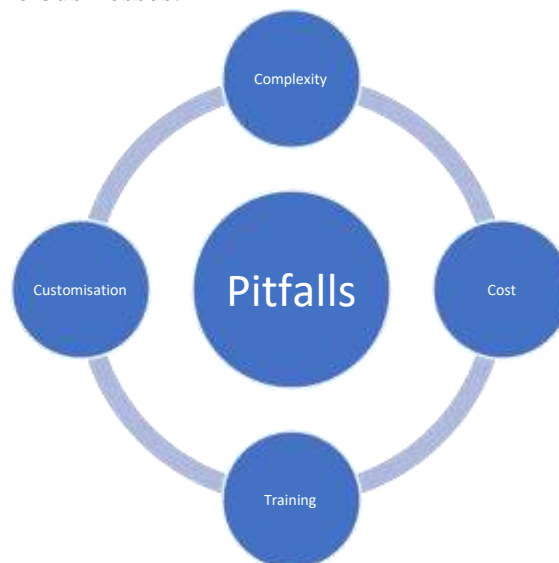
Maintenance and updating of ERP is required on a timely basis as and when the organisation makes changes in its strategy. If the organisation had taken the subscription for only certain features, they can add few more additional features based on their requirement which would increase the cost of the implementation. Hence every organisation should be very cautious while module selection and describing their specifications.

Cloud Solutions – More cost-effective Method for Legacy applications in ERP integration

The legacy methods which were not possible to be designed in the ERP platform due to cost and difficult levels are continued to be used through the Cloud based systems. This cloud system is a best alternative solution and it provides cost effectiveness and flexibility features to the organisation. Many organisations prefer this method of cloud systems for their businesses because they help them to attain their goals in an easier and well-defined manner.

Pitfalls of the ERP Integration:

ERP system is a highly demanding software solution for the business process for the purpose of the integration, in spite of the advantages there are certain pitfalls of ERP, irrespective of the onsite ERP system or the Online cloud-based ERP system. The disadvantages of the ERP integration occur due to the certain factors like the cost, complexity, training required for the end users and the customisation required for the businesses.



Complexity:

ERP system is very complex because of the special knowledge required to handle the system. Because of this reason the organisational departments may not accept the new system immediately. Before implementation of ERP system in the organisation, it is required to take into confidence of all the stakeholders and then go for the ERP implementation process.

Cost:

The implementation of ERP in any organisation is a very costly affair. Hence proper research should be done before undertaking the implementation process. All the contingency situations should be properly studied and included in the budget to handle the situations in a right manner. Because

organisations should not waste their money on trial-and-error basis.

Training:

ERP system has a complex nature, because of which the users of the system need to be well trained before using the system. The cost incurred for providing training to the users also needs to be included in the budget. Regular training should be conducted for all the upgradations of the system to provide better performance and efficiency.

Customization

Organisations require the ERP solutions to be customised, as they cannot use the system without customisation. Almost 75% of the organisations do at least 11% of the software code customisation to suit their requirements. Because of this customisation, the system would become more complex for the end users.

Conclusion:

Enterprise Resource Planning provides a wide scope of benefits to the organisations employing them in their day-to-day activities. It is one of the dominant technologies which is used by the enterprises for their business monitoring and controlling process through the integration of all the internal and external functionalities. ERP provides various features and applications for the SMEs with all customisation and needs. It is the primary role of the organisation to decide upon the tools which they would require for their business and design the software solution based on their requirements. The benefits and the challenges of ERP are based on the various factors like the ERP vendor selection, designing of the ERP based on the organisational specifications and most importantly the ERP implementation process. The SMEs should study each and every factor before the ERP implementation in their premises to avoid the failures of the ERP system implementation at a later time.

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