

ERP in Indian SMEs: Issues, challenges and Future

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Abstract:- In knowledge based economy, Indian enterprises have challenges to provide high quality product at low cost, to remain more competitive in world. Small and Medium-Size Enterprises represent the spinal cord of Indian economy. To improve productivity and overall business performance, Enterprise Resource Planning (ERP) is one of the solutions for the Small and Medium Enterprises (SMEs) in order to face the global challenges. According to SME chamber of India, there are about 26.1 million MSME (micro small and medium enterprises) in India, contributing about 17% to India's GDP and 45% to aggregate industrial output. But the adoption of Information Technology and IT based ERP system is quite unsatisfactory.

This paper discusses SMES contribution in economic growth by evaluating new information function provided by ERP system which acts as drivers to increase SMEs' efficiency and productivity in the current global economy in terms of benefits. Author also shades light on issues, Challenges of ERP implementation In Indian SMES. In this paper author tried to answer the research question that Is ERP system act as driver for growth of SMEs in India? Cost effective and flexible architecture and integrated solutions which were initially targeted for large businesses can also bring value for Indian SMEs.

Index Terms- ERP in Indian SMEs, Issues in Indian SMES, Challenges for ERP Implementation in Indian Context.

1. INTRODUCTION

According to the Government of India's Micro, Small and Medium Enterprises Development (MSMED) Act, 2006, A small enterprise is an enterprise where the investment in plant and machinery is more than Rs. 25 lakh but does not exceed Rs. 5 crore; and A medium enterprise is an enterprise where the investment in plant and machinery is more than Rs.5 crore but does not exceed Rs.10 crore, which engaged in the manufacture or production, processing or preservation of goods. The Enterprises engaged in providing services are defined as A small enterprise where the investment in equipment is more than Rs.10 lakh but does not exceed Rs. 2 crore; and A medium enterprise is an enterprise where the investment in equipment is more than Rs. 2 crore but does not exceed Rs. 5 crore. [21]. Indian SMEs have limitations of investment in plant or equipments. But SMEs are the engine of economic development, they constitute the majority of business enterprises, and they are vital for employment generation and poverty alleviation. Many developing-country SMEs have inserted themselves into vertical production networks as component suppliers to big multinational companies, increasing their contribution in export receipts. SMEs, as major employers especially in rural areas, make valuable and necessary contributions to poverty alleviation by increasing income levels and creating jobs. In both developed and developing

economies, the organic growth of small enterprises is a vital source of wealth creation.[33]

SMEs are the driver of economic growth and innovation. The total number of SMEs in the economy depends on the rate of SME creation and rate of SME destruction. Profitable market increases the total number of SMEs in the country, and increase in SMES also increases job creation and income per capita. New market opportunities will be created when people will increase their consumption. Contrary to multinational corporations, the growth of SMEs directly benefits the country because most SMEs are domestic firms. When the number of SMEs increase as a result this their knowledge of their product and industry is raised which drives the innovation in product and process; leads to economic growth. It also helps them form a competitive advantage to generate more profits. [34]

Importance of SMEs Indian Economy

Small and medium enterprises (SMEs) play a key role in the growth of the Indian economy by contributing to industrial output or generating employment, the SMEs have always made remarkable progress achieved across traditional and emerging sectors such as manufacturing, pharmaceuticals, textile, food processing, and retail, garments, IT and several other service sectors. SMEs generates millions of jobs, especially for low-skills level, low educated people. [ec] Currently, India's SME sector is a flexible

dynamic, and productive entity, as it employ nearly 81 million people in 36 million units across the country and contribute almost 45 percent to the total industrial output. In recent times, SMEs have been fulfilling to Indian Market as well as international markets and have emerged as leaders even during the period of recession by restoring jobs and business activity. It acts as a prime medium for regional development and the economical development of weaker sections of society.[35] At the time of removal of quantitative restrictions under WTO in 2001, it was predicted that the sector would fall down under the attack of global products. But this sector quickly adapted and restructured itself with technology, accepted norms of quality and competitiveness. It is expanded faster than the rest of the industrial economy. [10] Its contribution to the Indian GDP, which as per the Economic Survey of India for the year 2012-13 is 7.9 percent Due to their contribution to the Indian GDP, which as per the Economic Survey of India for the year 2012-13 is 7.9 percent, they can be aptly called the backbone of the Indian economy, called as the backbone of the Indian economy [35].

2. GROWTH AND CHALLENGES IN THE SMES SECTOR IN INDIA

The number of small-scale units has increased from an estimated 48.8 million units in the year 2013-14 to over 46.7 million in the year 2012. Due to Great Potential of SMEs, it has performed exceedingly well and created wide industrial growth opportunities and diversification. SMEs sector has made significant contributions towards employment generation and rural industrialization. SMEs sector in India creates largest employment opportunities for the Indian populace, next only to agriculture. . Statistics from Ministry of Micro, Small & Medium Enterprises also revealed the growth of SMEs industry in India It has been estimated that 100,000 rupees of investment in fixed assets in the SMEs sector generates employment for four persons[39] [38]. Small and Medium Enterprises (SMEs) play a vital role for the growth of Indian economy by contributing 45% of industrial output, 40% of exports, create 1.3 million jobs every year and produce more than 8000 quality products for the Indian and international markets. There are approximately 30 million MSME Units in India and 12 million persons are expected to join the workforce in the next 3 years. SME's Contribution towards GDP in 2011 was 17% which is expected to increase to 22% by 2012. SMEs are the source of several innovations in manufacturing and service sectors, which serves as the major link in the supply chain to corporate and the PSUs. Promoting SMEs is nothing but promoting the development in the rural areas of India. [37]

It is necessary to support the SMEs, for empowerment of optimum utilization of resources, for achieving the

success; as SMEs are growth engine of Indian economy. The SMEs need to be educated and informed of the latest developments taking place globally and helped to acquire skills necessary to rate with the global growth. [37]

Despite its commendable contribution to the Nation's economy, SMEs are facing a number of problems and several challenges. At the same time it has limitations of SMEs, like Low Capital base, Concentration of functions in one / two persons; Inadequate exposure to international environment, Inability to face impact of WTO regime, Inadequate contribution towards R & D, Lack of professionalism.[22]

Challenges for Indian SMEs

- Inadequate infrastructure, finance, non-availability of highly skilled labor at affordable costs [40]
- Absence of adequate knowledge, technology, low production capacity, ineffective marketing strategy, constraints on modernization & expansions, identification of new markets, follow-up with various government agencies to resolve problems[22]
- Becoming More Competitive in the global market by cost-cutting, quality enhancement, productivity improvement and efficient management of supply chains, greater public and private investment in infrastructure with limited investment and machinery.[36] SME Sector does not get the required support from the concerned Banks, Financial Institutions, Government Departments and Corporate, to become more competitive in the National and International Markets.[36]
- Enhancing Access to Global Markets by greater policy coordination within the Indian Government for a coherent approach to emerging trade policy issues, an institutional partnership between the private sector and the Government in devising specific marketing strategies.[36]
- Safeguarding Intellectual Property by effectively administering copyright and patent legislation, encouraging more innovations and patenting them.[36]
- Promoting Small-Scale and Cottage Industries, and Regional Cluster Development by removing policy impediments; financial support; technology, skills and quality upgrading; market support and improving links between small and large firms. [36]
- Increasing Exports[36]

- Enhanced competition from China and a few low cost centers of production [22].

Indian SMEs have been facing a tough time due to globalization and liberalization in trade, coupled with WTO regime, but the SMEs who have strong technological base, international business outlook, competitive spirit and willingness to restructure them, better withstanding of the present challenges can make shining make their own contribution to the Indian economy [22].

The government has a vital role to play creating awareness about ICT applications amongst Indian firms, above all in micro, small, and medium enterprises (MSMEs) [41]. While SMEs are slowly adopting IT tools in their operations to become more competitive, but the penetration of IT in SMEs is much below than its potential. Currently IT can be used in areas like production monitoring and control, quality monitoring and control, etc. can streamline the business process and SMEs are slowly awakened about this [38].

3. ERP AND SMEs IN INDIA.

Enterprise resource planning (ERP) systems integrate and automate internal and external management information across an entire organization, embracing manufacturing, finance/accounting, sales and service, customer relationship management, etc. The purpose of ERP is to facilitate the flow of information between all business functions inside the boundaries of the organization and manage the connections to outside stakeholders. Enterprise systems (or Enterprise Resource Planning) are an emerging technology that belongs to the scientific discipline of information systems [18] [20].

This is a software package which should include the following features:

- An integrated system which functions in real time not requiring you to depend on periodic updates.
- It should have a common database.
- Each module should have the same look and feel to uncomplicated things.
- Each department should be able to access the system without having to consult the IT department.

ERP system provides advantages like provides visibility of all the important processes across various departments of an organization; automatic and coherent work; unified and single reporting system to analyze the statistics/ numbers/ status etc in real time, across all the functions / departments; provides Business Intelligence functionalities; Advanced e-commerce integration to handle web based order tracking/ processing; provides secure as centralized security policies for all the transactions enable better/ faster collaboration across all the departments; possible to integrate other systems (like bar-code

reader, for example) to the ERP system through an API (Application Programming Interface) [7].

But there are some disadvantages of ERP system like cost of ERP Software, planning, customization, configuration, testing, implementation, and further up gradations ; time required for implementation(ERP deployments take 1-3 years to get completed and fully functional); difficult to calculate return on Investment; Migration of existing data to the new ERP systems [7].

There are different Issues and Challenges of ERP implementation In Indian SME's like lack of Awareness, perception that ERP is meant only for large firms mainly owing to the high costs of acquisition, Earlier Implementation failures , customization increases the cost; less of capital than their larger counterparts, Change management, Limited resource of in-house IT team. Some of the factors to be considered before starting an ERP system implementation are:

- Infrastructure resource planning
- Education about ERP
- Human resource planning
- Top management commitment
- Training facilities
- Right people for the implementation

These factors help organizations to understand their level of preparedness for an ERP implementation [7]. Before the implementation organizations must evaluate organizational objectives and requirements, Planning, customer profile, global support base as well as the financial credentials [7].

Small to medium-sized enterprises (SMEs) can find difficult to put the power of technology solutions into the work for their businesses as there are some ERP implementation challenges and business challenges like global competition, evolving operational processes, complex regulations and product diversification. Indian SMES can convert these challenges into opportunities with a powerful IT solution. ERP system can provide SMEs with the launch pad for long-term growth, competitiveness and success [44]. Small to medium-sized enterprises (SMEs) often have sophisticated and industry-specific business processes and IT needs, but must cater these needs with relatively small budgets and IT staffs.

4. LITERATURE REVIEW

In the late 90's, researchers started to show interest in Enterprise Resource Planning. Davenport (1998) discussed the functionality of an ERP system and the complexity of implementation. Van Everdingen et al. (2000) surveyed more than 2000 European companies in order to study adoption of ERP in different industries. Much of the early research focused on implementation issues and the use of "Best Practices" in processes. Nau and Lau (2001) identified certain factors by analyzing selective articles for successful

implementation of ERP and Muscatello (2002) surveyed the essential factors in ERP implementation. Al-Mashari (2002) presents a research agenda for ERP and identified a huge gap in the ERP literature. Ashim.et.al[2004], studied the design and implementation risks factors for ERP systems in Indian organizations. Buonanno.et.al[2005], analyzed of the empirical data and composed that that business complexity is a weak predictor of ERP adoption. Wu.et.al [2006] used Hochstrasser model is used to analyze the uncertainties of tangible benefits in the process of ERP project investment. Jafari et al. (2006) carried a research for Malaysian SMEs and identified ten important issues for the success of ERP implementation. Woo (2007) carried out research for major Chinese organizations and reported six critical issues for the successful implementation of ERP systems. Upadhyay and Dan (2008), carried out research study for Indian SME organizations where the researchers empirically assessed and, on the basis of responses received from the respondents, identified certain issues that actually would lead to the success of ERP implementation. Kale.et.al(2009), presented that in India, SMEs are the backbone of the economy and are today faced with global competition. Parijat.et.al(2009), targeted to the SME's which already completed the process of adopting an ERP system to bring out the underlying factors which can prove decisive for success. Upadhyay and Dan (2009) performed a research for Indian SME's and revealed that certain critical factors could lead to positive implementation of ERP. Päivi(2009) discussed that the principal reason for failure has often been associated with the poor management of ERP implementation projects. Noudoostbeni et al. [2009] assessed important success factors and failure factors in Malaysian SME companies. Garg(2010), explored and validated the existing literature empirically to find out the critical failure factors that lead to the failure of ERP in context to Indian retail organizations. Ganesh.et.al(2010), argues that Indian consultants often fail in recognizing the technology, vendor, employee, project etc related influence to the ERP implementation. Poonam(2010), explored and validated the existing literature empirically to find out the critical success factors. Above literature study clearly point out that ERP system will help SMEs to achieve growth challenges and remain competitive in global economy.

4. ERP SYSTEM AS GROWTH MULTIPLIER FOR SMEs IN INDIA.

A vast majority of small and medium scale organizations have some significant constraints in their resources. While Indian SMEs overlook the benefits of integrating ERP systems stating that such ERP software are beyond their budgets as the reason, but there is no doubt that the implementation of ERP

software can improve the company's performance as well. The awareness of implementing enterprise business application (i.e. ERP) among SMEs is less than 35%, as compared to over 80% for large organizations as per survey conducted by International Data Corporation (IDC). The critical influencing business drivers for SME segment will be to increase the overall business efficiency, to increase the capital and labor productivity and to reduce the fixed and variable cost. Research and survey by leading IT vendors clearly points out that the need for technology solutions is not only confined to Tier 1 cities in India but also business organizations operating from Tier II and Tier III cities also need ERP solutions as well. As all ERP vendors are focusing on this market, the Indian SME segment will have many alternatives to choose any one out of such high competitive price [44].

SME Challenges	ERP Software Benefits
Reconciling disparate, incompatible and/or limited function legacy systems from organic growth or acquisitions	A common and capable platform for all core business operations
Rationalizing distributed, inconsistent and/or out-of-date corporate data	Support for "single-version-of-the-truth" data that can be shared across departments, and with key partners and customers
Meeting regulatory requirements, including those specific to vertical industry sectors and different countries	Provides integral regulatory compliance and reporting functionality
Inadequate IT systems constrain growth	A multifunction and scalable platform that can keep pace with, and facilitate, company growth
Inconsistent and/or inefficient business processes, which are labor intensive, time consuming and error prone	Standardization and automation of core processes; templates for best practices; tracking of key performance indicators
Global expansion, which requires currency conversions, financial consolidations and roll-ups	Built-in support to track exchange rates, convert currencies and consolidate financials
The need to interface easily with other IT software and systems	Support for standard interfaces to most commonly used software and systems, including mobile
The need to diversify with expanded product	Tools to track product SKU inventory,

or service portfolios	shipment logistics, service delivery, etc.
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Source: SMB growth 2011

As above table shows that can fulfill SMEs challenges and act as growth multiplier as it helpful for global expansion and sustain in competition. ERP software provides many benefits like improves the efficiency of business process, cut down in labor cost, information automation, timeliness delivery of information. As ERP usage reduces manpower, time, error, land and improves business process transactions, efficiency, and quality of work, innovative in process. So ERP can act as growth multiplier for SMEs.

But still there are some reasons for not using ERP system. While many new SMEs start each year, nearly 50% end to exist in the first 3 years of business itself, and only 40% survive beyond 10 years. Though it is assumed that all SMEs desire growth, majority of the firms do not consider on of long-term business strategy but focus only on survival. When the business begins to fail as a result of not keeping track of the changing market scenario, then only SMEs think about change only [41].

According to Gattiker et. al [2005], ERP implementation failure rate is from 40%. According to Gordon [2006], the main factors that can be held responsible for failure of ERP system are-poor planning or poor management, change in business goals during project, lack of business management support, issue of concern is the cost feasibility of system integration, training and user licenses, system utilization, etc.[45][46].

ERP client server has been implemented by many large media companies despite the fact that this application is quite expensive. Most of small and medium-sized companies never think to implement the software in their business systems due to high cost of proprietary software and time required for the implementation. The proprietary software vendors of ERP include maintenance fees, initial cost, training cost and hardware cost. But there are different low cost options/approaches are available in market.

5. LOW COST ERP SOLUTIONS

There are different solutions available in market to get low cost system which is helpful for running business processes of SMEs efficiently and improves the productivity of business by reducing inputs and improving output of business process.

Open source ERP

Open Source ERP does not require a license or implementation cost like proprietary software. It can only download from the internet, installed in the system and run your business. Open Source ERP provides most of the function of ERP system to cater

the needs of small and medium-sized companies Download and installation process lasted only a few minutes and for you immediately, of course ERP software has advantages and disadvantages as other software.[42]

Advantages

- Since maintenance fees are not included in the initial cost and there are no licensing costs, open source systems are essentially free to own and use. The total cost of ownership may also be less than proprietary software since maintenance fees are usually lower.
- The source code can be modified and customized to meet your organization's business needs and there are typically a wide range of integration formats.[42]

Disadvantages

- The basic, free version of open source software will probably not fully meet your organization's expectations so it will inevitably end up investing in maintenance and support. The more your organization customizes the software, the more money it will likely end up spending.
- Since open source may provide fewer active customers than top-tier commercial ERP providers like SAP.[42]

Cloud based ERP

Cloud based solution provides you the best practices and tools that were available to only larger enterprises until now and that too at affordable price. It consist all the features of best Enterprise level ERP that are required by SMEs and is delivered using cloud route. Like proprietary ERP, Cloud based ERP software provides all the functions like automated business processes, information management with added intelligence, ensuring improved productivity and accelerated growth but it also frees up your team from traditional admin activities, and focus on core business processes. On Demand ERP captures tasks across Apps and makes them available on your dashboard with notifications for each task. The cloud ERP Applications are seamlessly integrated to work from a single login on a single database. Small & Medium enterprises (SMEs) including Start ups across India, Australia, USA and Europe are Accelerating Growth by leveraging Cloud ERP. It provides advantages like minimum investment, Minimized technical staff involvement, increase scalability, Fewer Responsibilities, lower initial cost, Roles based Dashboard, Just Configure and Get Started with On Demand SaaS ERP on the Cloud ,Zero IT infrastructure cost and maintenance with SaaS ERP run and managed by cloud, and Reports and Analytics in the cloud built into the ERP system [43]

Traditional On-site ERP is being replaced by online ERP accessed through a web browser. The Online ERP is also known as web based ERP, hosted ERP,

cloud ERP, SaaS ERP, or on-demand ERP. Small & Medium Companies as well as Start ups are moving ERP cloud applications to manage all their Business Processes. Web-Based ERP reduces total Cost of ownership as compare to on site ERP. It provides rapid implementation with customization and free up-gradation. But in terms of features and scalability it provides limited functionality and scalability.[43]

6. CONCLUSION

SMEs area unit plays important role in economic development, as they represent the majority of business enterprises, and that they area unit very important for employment generation and financial condition alleviation. SME sector in India has been growing speedily over the past few years, however the ICT based Practices like ERP adoption of among SME sector has been stunning slow. This will be attributed to varied provide aspect and demand aspect constraints that are touching the ERP adoption among the SMEs. The advantages of ERP area unit clearly visible as corporations having ERP systems and processes have managed sturdy profits and efficiencies. SMEs area unit currently realizing that their growth will solely be sustained if they will properly manage the degree of their business through a lot of involvement with ICT. As SME corporations modify to implement ERP system with all its power, it's imperative that the highest leadership maintains associate perspective of continuing commitment and properly order the implementation of ERP initiatives across the organization. Clear communication and Planning can go an extended means in making a flourishing scheme of IT among a SME. SAP Business All-in-One solutions provide growing SMEs an inexpensive and rapid-to-implement way to gain "professional-grade" ERP capabilities and SAP's best-practice business processes. Social, mobile and cloud technology is new wave in future SMEs. These technologies not solely empowers worker however conjointly give access to up-to-date data among a moment with value effectiveness. The versatile design and integrated solutions with customization were first targeted for big businesses can even bring worth for Indian SMEs.

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