

Successful Information Technology Implementation Practices to Indian SMEs

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Abstract

Information Technology (IT) is an important tool to support any business. SMEs (Small & Medium Enterprises) face various business challenges and IT can play a critical role in supporting SMEs to successfully confront the challenges and grow in their business. Successful implementation of IT is still a taboo for SMEs due to various known and unknown reasons and they are not able to decide upon the proper implementation of these systems. On the basis of the successful case studies of the IT implementation in Indian SMEs and based on in-depth interviews with the SMEs who have implemented IT, this paper presents the framework for successful IT implementation practices to Indian SMEs.

Keywords: Information Technology, Small and Medium Enterprises, IT implementation, successful IT practices.

1. Introduction

SME (Small & Medium Enterprises):

SMEs is an integral part of India's growth story and often are the main driver for country's economic stability. There are about 48 million MSME (Micro, Small & Medium Enterprises) units across the country employing about 106 million people and they play a pivotal role in the growth of India's economy evidently as they contribute nearly 8 percent of the country's GDP (Gross Domestic Product), 45 percent of industrial output, about 40 percent of exports, and produce over 8,000 varied quality products. The SMEs in India adds over 1.3 million jobs per year. In India, SMEs are defined as per MSMED (Micro, Small and Medium Enterprises Development) Act, 2006 which categorizes SME as below:

- Manufacturing Enterprises investment in plant & machinery which exceeds INR 25 lakhs but does not exceed INR 5 crores is called Small Enterprises and Medium Enterprises are those whose investment exceeds INR 5 crores but does not exceed INR 10 crores.
- Service Enterprises investment in equipment which exceeds INR 10 lakhs but does not exceed INR 2 crores is called Small Enterprises and Medium Enterprises are those whose investment exceeds INR 2 crores but does not exceed INR 5 crores.

IT Sector

Information Technology has registered an exponential growth worldwide and has touched millions of lives in multiple ways. The recent year's have witnessed a noticeable change in the way IT is used and it is also understood that in the next few years, this change shall add a new dimension to the way life is lived. IT sector in India generates about 2.5 million direct employments. India is now one of the biggest IT capitals of the modern world and all the major players in the world IT

sector are present in the country. IT includes in the supply side computer hardware, software, telecom equipment, services, digital business, micro-electronics based industries and in the demand side application of IT in all economic sectors including flexible manufacturing, financial and transaction systems, information services, electronic publishing and management information systems.

IT in SMEs

If SMEs adopts Information Technology for mitigating the crisis of growth, then they can - Increase the market reach, Increase speed to respond to the market and lower operating cost in the long run (Donald 2008). The adoption of Information Technology impacts the working of the organization and brings about the change. As a result, the organization becomes more competitive and successful in the market place (McAfee 2006). IT in SMEs is gaining the popularity and the recent growth of the smart devices, penetration and reduction in the bandwidth cost has made IT affordable to SME segment.

2. Literature Review

Ghobakhloo, Mortezaet al., (2012): In this paper, the researcher aims to achieve a better understanding of IT adoption in SMEs through explicitly and understandably exploring and identifying factors influencing IT adoption processes within SMEs. IT Adoption in SMEs studies have concentrated on influencing factors such as top management, organizational behavior and characteristics, firms' resources, government, customers, supplier and external IT consultant and vendors.

Sharma, Monika et al. (2010), the researcher says that SMEs in India are one of the most aggressive adopters of ERP Packages. Most of the Indian SMEs has adopted the traditional ERP Systems and have incurred a heavy cost while implementing these systems. The researcher presents the cost savings and reduction in the level of difficulty in adopting a cloud computing Service (CCS) enabled ERP system.

Kotenikov, Vadium. (2007), in this literature, the author remarks that all the governments encourage the growth of local small & medium enterprises (SMEs), because they help in lessening the poverty by providing jobs and thus increasing income levels. However, the SMEs in Asia-Pacific region¹ are yet to obtain benefits and had been slow to adopt ICT because of the number of constraints they face.

3. Objectives

1. To understand the present practices in implementing IT in SMEs.
2. To propose a framework for successful IT implementation practices in SMEs.

4. Research Methodology

Case study method was used for this study. Ten (10) organizations in Bengaluru, India were selected and studied for a period of 1 month during IT implementation in those organizations. These are the SMEs who has implemented IT successfully and are able to reap the benefit of IT. Number of interviews with industry experts

were conducted to understand and to arrive at the framework for successful IT implementation practice for SMEs.

5. Limitations

This paper is confined to the SMEs in India and their IT practices. This paper might not handle entirely the success elements for IT implementation and for varied industries. However the study indicates the successful IT implementation in general. The need for industry specific successful IT implementation seems to be necessary.

6. Research Findings

Based on the analysis of the data collected, researcher had the opportunity to explore various factors for the successful IT implementation made by the respondents during the interviews and based on the researcher experience, the below MISI (Motivation, Identification, Selection & Implementation) model is proposed for the successful IT Implementation for SMEs.

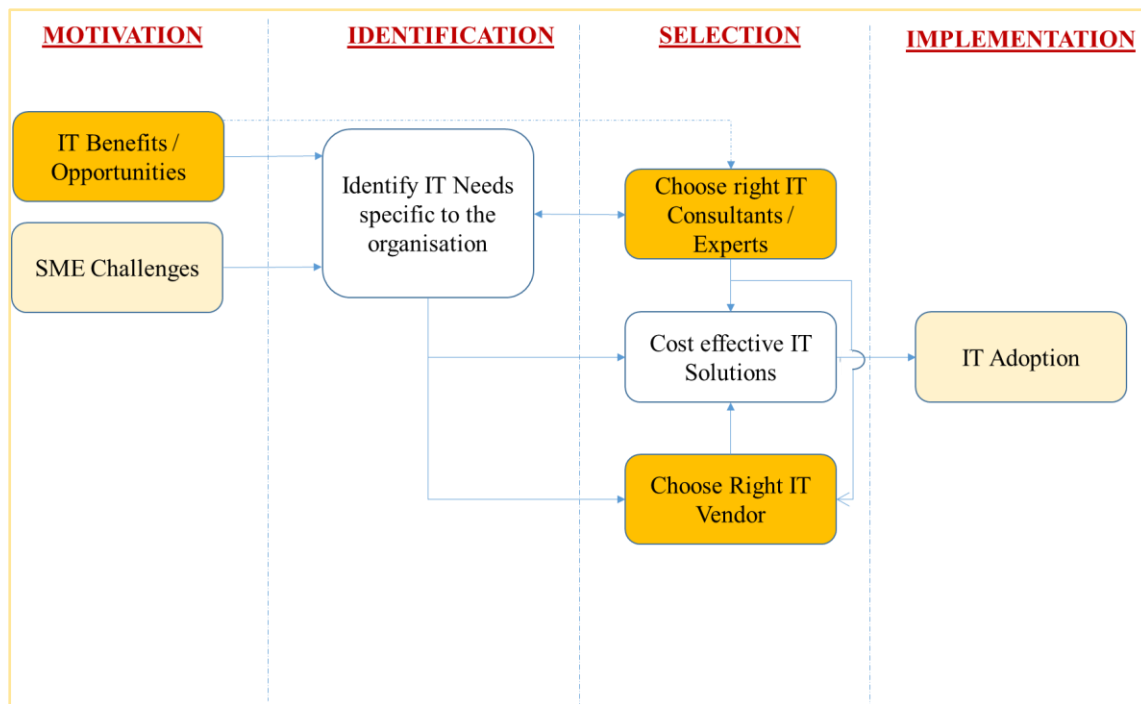


Figure 1: MISI (Motivation, Identification, Selection and Implementation) Model for successful implementation of IT for SMEs

The MISI Model is explained in four stages as explained below:

1. Motivation
2. Identification
3. Selection
4. Implementation

6.1 Motivation:

Any new implementation or change in the system shall be successful if the benefit is understood by the organization which shall be a motivation to move forward in the path of success. The motivation stage is further explained below under the heading:

1. SME Challenges
2. IT Benefits / Opportunities

Understanding the Benefits that IT can provide or Opportunities for IT implementation shall be a positive motivator towards the successful IT implementation for SMEs. It is also equally important to understand how the new IT implementation shall solve the current problem, hence it is important for the SMEs to understand the current challenges that they are undergoing or may face in the near future.

6.1.1 SME Challenges:

The SMEs business challenges include Dearth of Easy finance and credit instruments, Limited Regulatory or Statutory policies or government support, Unavailability of Modern Technology, Lack of Basic Infrastructure Facilities, Absence of Exclusive Marketing Platforms, Non availability of Skilled Manpower, Uncertainty, Growing Fast, Risk and Competition. SMEs shall have specific Business Challenges in various stages of the business. An attempt is made to show that challenges and relevant IT Tools / Solutions shall benefit SMEs to overcome such challenges. SMEs business challenges are explained in 5 stages of business as below:

Stage 1: Existence – In this stage of existence SMEs shall have a major challenge of resource acquisition, getting new customers, delivering the products and services, technology development and accounting system.

The IT Tools / Solutions recommended for this stage include Email, Office Tools, Website, Intranet, Inventory Control, Manufacturing Control, Accounting System, Recruitment Process and Specialized Software.

Stage 2: Survival – In reaching this stage the business has demonstrated that it is a workable business entity. Once the business is started, then the next challenge for the business is to survive. In this stage of survival SMEs shall have challenge of recruitment and training, satisfy customers with the products or services, strategic positioning of products and services and taking care of accounting system & statutory compliance.

The IT Tools / Solutions recommended for this stage include Email, Office Tools, Website, Intranet, and eCommerce, Digital Marketing, ERP, Customer Support System, Payroll & Recruitment Process and Specialized Software.

Stage 3: Success – The business which has survived and doing well shall move to the next stage 'Success'. In this stage of success the SMEs challenges include Resource Expansion, Sales & Marketing, Internal Control and Financial Planning. The IT Tools / Solutions recommended for this stage include Email, Office Tools, Website, Intranet, and eCommerce, Digital Marketing, ERP, CRM, Project Management, Payroll & Recruitment Process and Specialized Software.

Stage 4: Take Off – In this stage the key problems are how to grow rapidly and how to finance that growth. Take off stage SMEs challenges include Client Delight, Business Expansion and focus on profitability.

The IT Tools / Solutions recommended for this stage include Email, Office Tools, Website, Intranet, eCommerce, Digital Marketing, ERP, CRM, Project Management, HRM (Human Resource Management), Enterprise Solutions, Mobile Applications and Specialized Software.

Stage 5: Resource Maturity – Being here for long is a challenge and the business needs to be well supported by IT. The Resource Maturity stage challenges include Resource Management, Ready for Change and Future Growth.

The IT Tools / Solutions recommended for this stage include Email, Office Tools, Website, Intranet, eCommerce, Digital Marketing, ERP, CRM, Project Management, HRM (Human Resource Management), Enterprise Solutions, Mobile Applications, Customizations, Specialized Software and Data Analytics.

6.1.2 IT Benefits / Opportunities:

IT is a set of systems which supports the manual process to an automated process, IT provides various benefits and opportunities for the SMEs to overcome the challenges and supports in the business growth. The various parameters in which the IT benefits or opportunities expressed is as below:

- Digital Presence
- Generate Leads
- Improved Communications
- Material Requirement Planning (MRP)
- Manufacturing Resource Planning (MRP II)
- Efficient Human Resource Management
- Better Decision-making
- Faster processes leading to efficient order fulfillment
- Improved Customer Acquisition
- Better monitoring of Business
- Improved Quality of Deliverables
- Better Customer Service
- Availability of relevant information
- Reduced cost
- Improved overall Efficiency
- Increased Competitiveness
- Efficient project execution
- Automated Business Process
- Design Efficiency or specialized requirement

As an alternative option, once the SMEs identifies the IT needs, they can choose the right IT Consultants / Experts to suggest them to identify IT needs specific to the organization.

6.2 Identification

Once the SMEs has identified the challenges and benefits that IT can provide in the 'Motivation' stage, to progress further SMEs need to identify the right IT needs that

is specific to the organization. Identification is a stage where the motivation stage shall be an input and the external consultant can also support in identifying the right IT solution for the organization.

6.3 Selection

Once the SMEs identify the IT needs specific to the organization, the next step is to choose the right **IT Consultants or Experts**. In India the consultants are still not given priority as an alternative option they can choose the right **IT vendor** after identifying the IT needs specific to the organization. The **Cost effective IT** solutions can be chosen directly by SMEs or as a best option is take the advice of the IT Consultant / Expert and/or IT Vendor. The cost effective IT solutions (IT Infrastructure or Software Solutions) can be categorized into FOSS (Free & Open Source Software), One Time Purchase Software and Subscription Model / Pay Monthly Software. Based on the organization size and investment capability the relevant tool can be chosen by the particular Enterprises.

6.4 Implementation

SMEs who has identified the right IT solution need to adapt to it, implement it and maintain it. The real success of IT implementation lies in getting the best out of the implemented IT solutions. **Ghobakhloo, Mortezaet al. (2012)** explains in their research paper that the implementation success depends on both **internal factors** (Owner / Manager Characteristics, Organizational / behaviour and characteristics, Firm's resources and IT users) and **external factors** (IT products in market, External & Competitive Pressure, External IT consultants & Vendors and Government).

7.0 Conclusion

Most of the SMEs use IT as supporting system and successful organizations embrace technology and gain maximum benefit in the current global competitive environment. IT is given more importance in the current scenario than earlier. The IT is impacting everyday of life and its importance is felt by many. IT not only enhances enterprise performance in better utilization of its resources and cost savings, but also provides the window of opportunity to enhance the business beyond geographical boundaries. The supported MISI model shall give broader perspective of the IT importance to the SMEs and how they can implement IT at most cost effective way with the available affordable options as detailed. IT is no more an option to SMEs, it is the need of the hour.

8.0 Bibliography

- Ahmad, Nazir. and Jamshed, Siddiqui. (2013). "Implementation of IT/IS in Indian SMES: Challenges and Opportunities". *International Journal of Computer Applications*. Volume 61, pp.14-19.
- Andrew, McAfee. (2006). "Mastering the Three Worlds of Information Technology". *Harvard Business Review South Asia*. November.
- Canton, Naomi. (2012). "How the 'Silicon' is bridging the digital divide". *CNN*. Retrieved December.

- Churchill, Neil C. Lewis, Virginia L. (1983). “The Five Stages of Small Business Growth”, Retrieved from <https://hbr.org/1983/05/the-five-stages-of-small-business-growth>
- Ghobakhloo, Morteza, et al., (2012), “Strategies for Successful Information Technology Adoption in Small and Medium-sized Enterprises”. *Journal of MDPI, Information*. Vol. 1, Issue. 3, pp.36-67.
- Kotenikov, Vadim. (2007). “Small and Medium Enterprises and ICT”. UN-APCICT, UNDP.
- Mohan Raj, Prasanna; et.al. (May 2014). "Indian I.T Industry — A Model based approach to a shift towards a Prominent Presence in the Global Market"
- “Ministry of Micro, Small & Medium Enterprises”. Annual Report 2013-2014.
- Sharma, Monika. et al. (2010), “Scope of cloud computing for SMEs in India”, *Journal of Computing*. May. Vol. 2, issue 5, pp 144-149.
- “The Indian SME Survey Analysing Indian SME Perceptions Around Union Budget 2014-15”.(2014) *A Firstbiz-Greyhound Knowledge Group Initiative*. July.