



THE ORETICAL FOUNDATIONS OF ERP IMPLEMENTATION PHASES

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Abstract

Due to globalization of business, the organizations are forced to accept the information technology and system management. The organizations require to meet the expectation of stakeholders, competitive pressures, functional structure management, right kind of integration and flexibility between business operations. It helps the organization to maintain different currencies, language, tax policies according to which country their business operates. In this article supporting for an organization to phase wise considering factors. Because, the firms are investing heavily in ERP software development. It helps to the ERP consultant and ERP using companies for sorting out their problems in ERP Phases.

INTRODUCTION TO ENTERPRISE RESOURCE PLANNING (ERP)

ERP has been defined by researchers and practitioners in different ways. Broadly speaking ERP is an enterprise-wide information system that integrates and controls all the business processes in the entire organization.

According to **Nah and Lau (2001)** ERP is a packaged business software system that enables a company to manage the efficient and effective use of resources (materials, human resources, finance, etc.) by providing a total, integrated solution for the organization's information-processing needs.

Klaus et al. (2000) ERP systems are comprehensive, packaged software solutions seek to integrate the complete range of a business's processes and functions in order to present a holistic view of the business from a single information and IT architecture.

Kumar et. al. (2002) defined Enterprise Resource Planning (ERP) systems as configurable information systems packages that integrate information and information based processes within and across functional areas in an organization.

II. EVOLUTION OF ERP

Shankarnarayanan (1999) identified four phases in the ERP systems history as follows:

Phase I: The 1960's, most of the software packages (then usually bespoke developed) were designed to handle inventory based on traditional inventory concepts. The focus of manufacturing systems in the 1960's was on inventory control. During the mid-1960s, computerized Materials Requirements Planning (MRP) systems supported the creation and maintenance of master data and Bill of Materials (BoM)

Phase II: In 1970's, MRP systems that helps the master schedule built for the end items into time-phased net requirements for the sub-assemblies, components and raw materials planning and procurement.

Phase III: In 1980's, the concept of MRP-II(Manufacturing Resources Planning) systems evolved, as an extension of MRP to shop floor and distribution management activities.

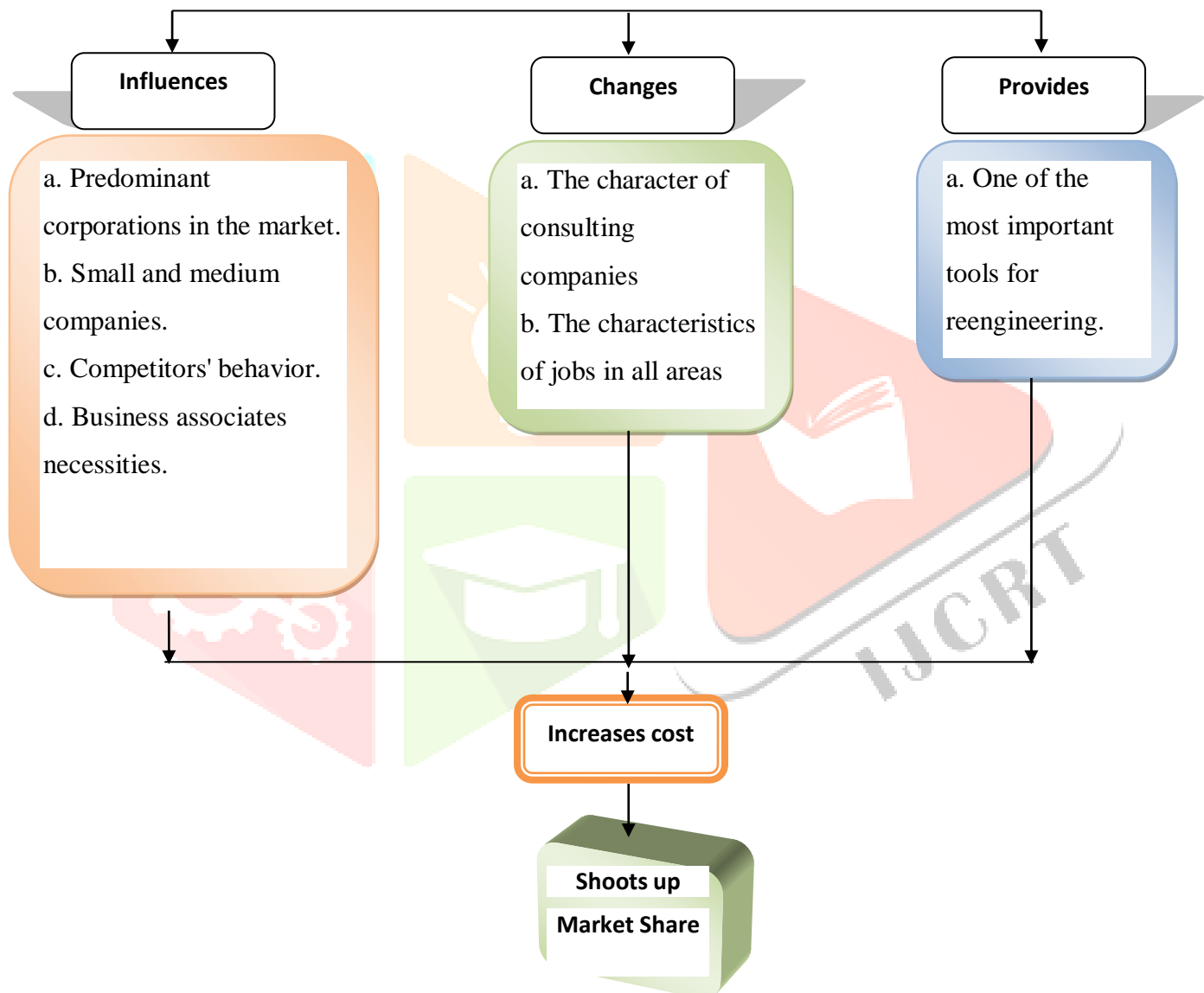
Phase IV: In early 1990's, MRP-II was further extended to cover areas like engineering, finance, human resources, project management.

The research problem related reviews are collected from journals, articles, magazines and websites. The objective is to provide an integrative examination about past related research and highlight the gaps in ERP implementation phases and key factors for Indian scenario.

The collected ERP reviews are grouped and presented under eight major categories.

1. ERP implementation phases
2. Key factors in ERP implementation
3. End users impacts
4. Organizational Impacts
5. Project management Impacts
6. External impacts
7. ERP success factors
8. Models of ERP implementation

III. Dimensions of ERP

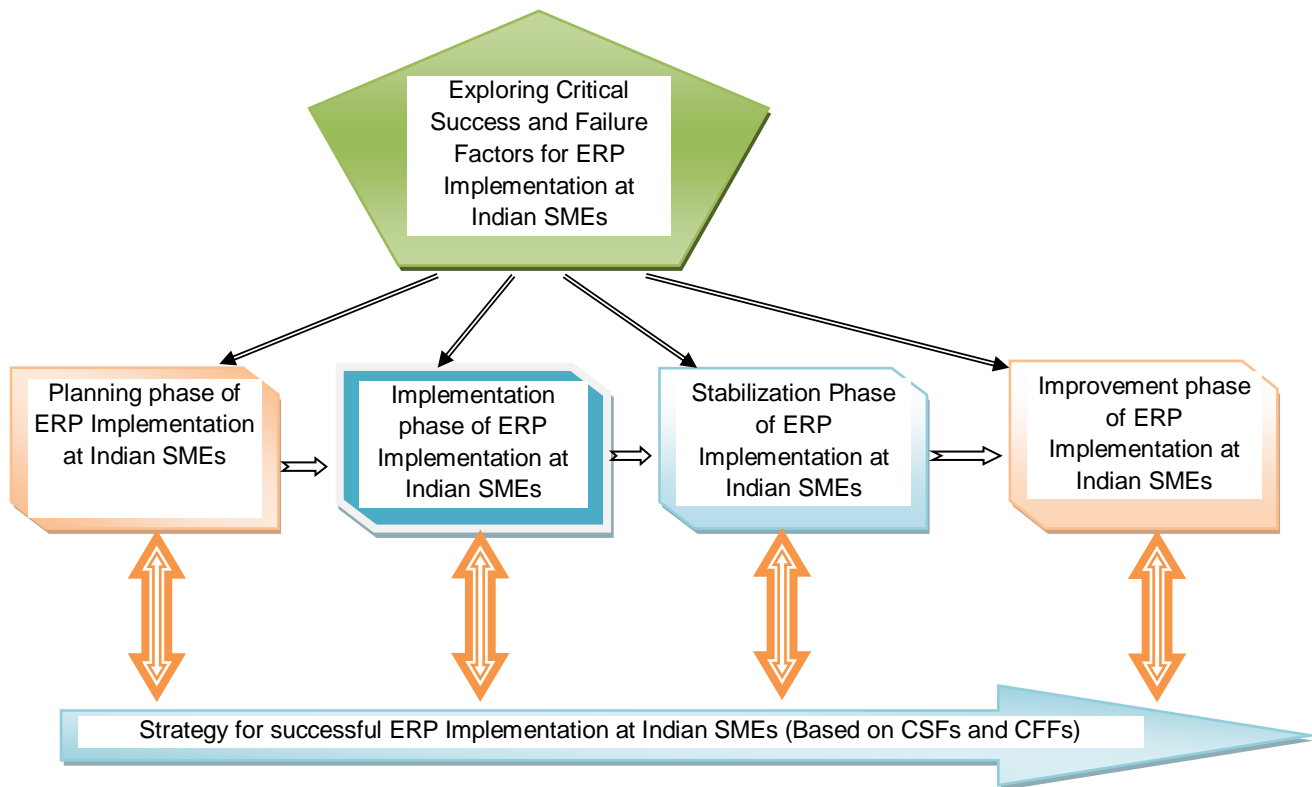


IV. THEORETICAL DEVELOPMENT OF ERP IMPLEMENTATION PHASES

Ross (1998) developed a five-phase model for ERP implementation. The phases of this model are; design, implementation, stabilization, continuous improvement and transformation. The design phase is a planning phase in which critical guidelines and decision making for implementation are determined.

According to **Arpita (2010)** the following ERP implementation model used to find out Critical Success Factors and Critical Failure Factors of Indian SMEs

Arpita ERP Implementation Success Model



Somers & Nelson (2001), Shanks & Parr (2000), Markus (2004) proposed the Critical Success Factors identified in the project phase.

1. Pre-Implementation

a. Planning, b. Top Management support, c. Team composition & Teamwork, d. Project Champion / Empowered decision makers, e. Business plan and vision, f. Project Management, g. Architecture choices, h. technical implementation, i. technological infrastructure.

2. Implementation

a. Top Management support, b. Team composition & Teamwork, c. Cooperation and communication (Interdepartmental), d. Project Management, e. Project Champion / Empowered decision makers, f. Vendor support, g. Software development, testing, troubleshooting, h. User involvement / training, i. Change Management

3. Stabilisation / Improvement

4. Post- Implementation

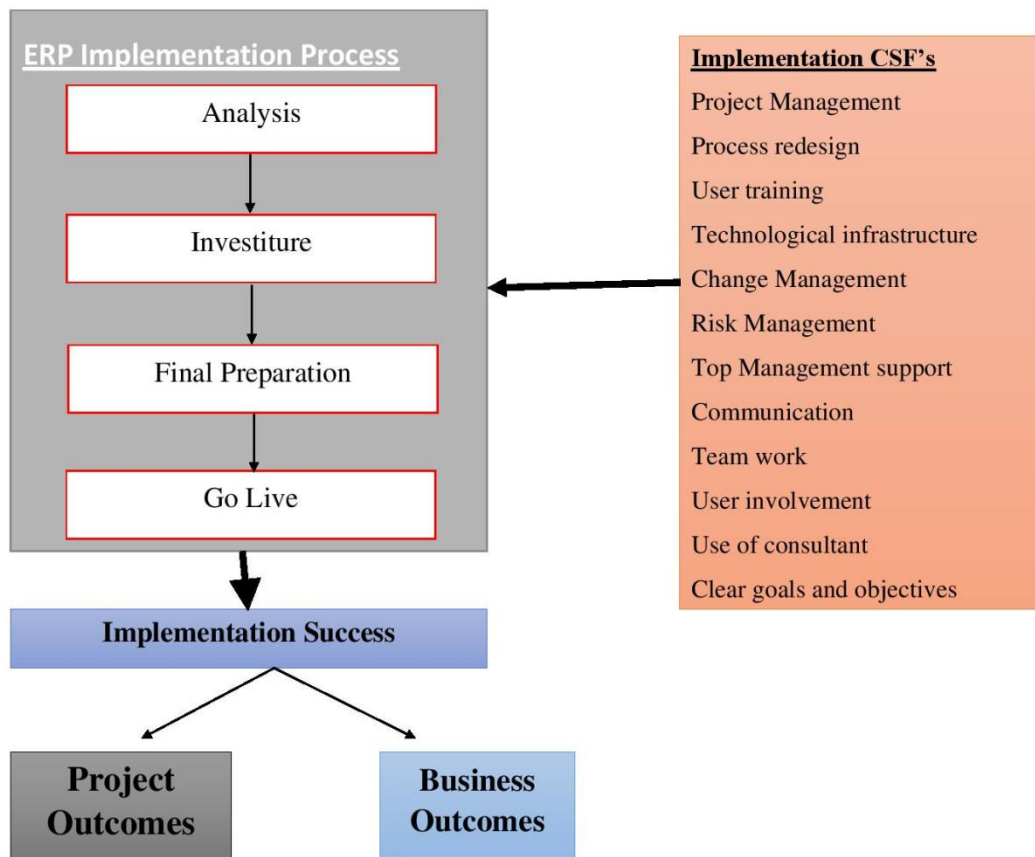
a. Top Management Support, b. Team composition & Teamwork, c. Cooperation and communication (Interdepartmental), d. Project Champion / Empowered decision makers, e. Vendor support, f. User involvement / training

According to Bhatti (2005) ERP Implementation Process are, Analysis, Investiture, Final Preparation, Go Live, Implementation Success, Project, Outcomes, Business and Outcomes

Al-Mashari et al. (2003) developed a taxonomy of Critical Success Factors for ERP implementation The taxonomy is comprised of following perspectives: (1) setting-up, (2) implementation, (3) evaluation, (4) ERP success, and (5) ERP benefits.

Markus and Tanis (2000) developed a four phase ERP implementation process model. The phases are chartering, project, shakedown, and onward and upward. The chartering phase includes development of the business case, selection of the ERP package, identification of a project manager, and approval of budget and schedule.

T.R. Bhatti Model of ERP implementation phase



According to Yu (2005) there are three main stages in an ERP implementation; i.e. pre-implementation, implementation (also known as during implementation) and post-implementation. Further these stages can be divided in to sub stages for various purposes such as ease of planning, execution, etc.

- I. Pre-implementation: 1. Product selection procedure. 2 Understanding and justification of the business need of implementing the ERP system in the organization.
- II. Implementation: 1. Project Planning. 2. Client commitment.3. Competency of consultants.4. Commitment from the top management.5. Importance given to IT function within the organization.
- III. Post-implementation: 1. Communication of support requirements during the pre-implementation stage. 2. Transfer of system knowledge to the client.

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