

ABSTRACT

Organizations in business both in private and public sector, from small to large, Government organizations are increasingly dependant on complex Information Systems (IS), often known as Enterprise systems (ES), or Enterprise Resource Planning (ERP) systems. The motivation for introduction of such systems is not only for improvement of factors like productivity, cycle time, supplier relationship and customer intimacy, but also for the strategic need to achieve a competitive edge in the long term. Business organization are implementing ERP and e-Business systems for the above mentioned benefits.

However, this view is not well supported by two decades of research on the benefits that IS brings to business organizations. A strong relationship between IS investment and firm performance does not appear to exist very much. IT productivity paradox proponents, in fact, claim that despite the massive investment in IT infrastructure and systems, these have not resulted in corresponding improvements in industrial productivity and operational success.

ERP and allied enterprise systems have been in use in business organizations over a period. The results reported, however, have been varied degrees of success in organizational and business process transformation. The investment and the total cost of ownership (TCO) of such enterprise systems tend to be high and it is matter of concern for all.

Merits of Enterprise Systems (ES) have been questioned in spite of their widespread use, with reported results varying from resounding success to utter failure, and sometimes rather mixed results. Several studies have been done on the critical success factors (CSFs) required for successful implementation of such systems. However, fewer studies have been made on the **usage effectiveness** of such systems over a longer period of time. By making a longitudinal study on the life cycle of ES starting from planning, implementation, maturity and continuous development to meet the changing business needs, a better insight of the factors of success can be obtained. This is what

has been attempted in the present work. Such studies of developed countries are not directly applicable for developing nation like India due to several socio-cultural factors and lower degrees of IT maturity.

This thesis addresses two issues or gaps in research. The first on developing and examining the hypothesis regarding the continuous transformation of ES with changing time and needs of the organization, and the other on the usage effectiveness in deriving higher business value from the IT investments made by organizations in India.

The thesis follows case studies of ES in large Indian enterprises, from implementation to usage, with both quantitative and qualitative research techniques to develop model(s) addressing the above two areas. On the life cycle of ERP and e-business implementations, a longitudinal study has been conducted in an oil-major belonging to the Public Sector. The research findings from this longitudinal study have been validated through discussions with a select group of consultants, project champions and academia in India. Their feedback has been used for the final analysis and recommendations. Many of the participants were industry-practitioners across different sectors, and belonged to companies varying in size, from large to medium scale Indian enterprises.