

Chapter I

The Tao to Understanding Enterprise Resource Planning Complexity: Sun-Tzu's Five Factors Revisited

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ABSTRACT

As exploratory research, the chapter's aim is to assess if Sun-Tzu's application of Taoist principles are applicable to the problem domain of Enterprise Resource Planning Management (ERPM). It argues that an ERP's complexity not only shares conceptually The Art of War's historical context, but also can be understood to be a disequilibrium force best understood using Taoist principles. Sun-Tsu's The Art of War (AW) has been adapted successfully to the military domain (MD); and, MD has been adapted to strategic management (SM). If an ERP's business drivers can be mapped to a firm's strategic goals, one may conclude Sun-Tzu's Art of War can be adapted to an ERP implementation (AW→MD→SM→ERP). Therefore, the authors hope to explore the applicability of Sun-Tzu's Five Factors of Initial Estimation (Five Factors), an Eastern philosophy (a non-linear thought process) to ERP-related Western-oriented project management techniques (a linear thought process).

INTRODUCTION

In spite of advances in project management, statistics and lessons learned from past failures, "...big IT projects, whether major technology installations or new growth strategies fail at an astonishing rate. These efforts consume tre-

mendous resources over months or even years and the toll they take is not just financial..." (Marchewka, 2006, pp.109-114). The myriad of strategic goals for an Enterprise Resource Planning (ERP) implementation include, afforded business process reengineering, enabled ability to derive additional value from supply chain, en-

hanced ability to future e-Commerce integration as well as integration with other internal business information systems, improved management of inventory costs, enabled replacement in part or whole legacy systems, empowered management of multinational enterprise competitiveness on a per unit basis, enhancing enterprise images, and further evolution of the e-business strategy. With such varied strategic drivers, ERP implementation rests on a host of forces whose impact can vary considerably from company to company (Fang & Lin, 2006). Though ERP systems are considered as technically complex projects, failure to plan well has been identified as the main obstacle to effectively deploying large-scale systems (Chen, 2001; McAfee, 2003; Muscatello & Parente, 2006).

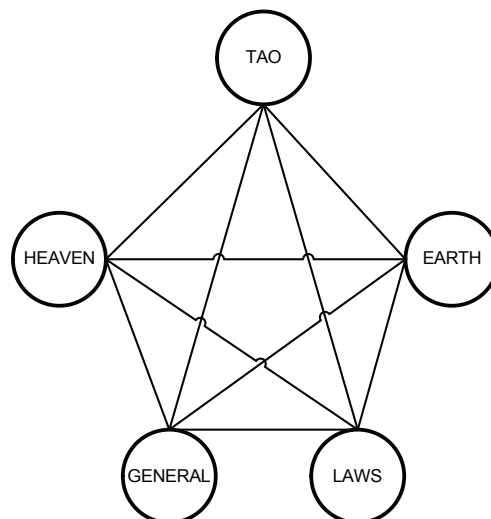
If research has concluded that ERP implementations are challenged not by the technology, instead by lack of planning; one might conclude top management's failure to plan may be related to its lack of understanding an ERP's true nature. Instead of reinventing the wheel with another paradigm, top management may find it efficient and effective to explore eastern philosophies accumulation of over five thousand years of knowledge

on achieving balance in dynamic environments (e.g. *Chou I (Book of Changes)*, Confucius, Lao-Tzu, Sun-Tzu and others). Thus, this paper's aim is to explore the applicability of Sun-Tzu's Five Factors of Initial Estimation (Five Factors), an Eastern philosophy (non-linear thought process) to ERP-related Western-oriented project management techniques (linear thought process).

The chapter's format is as follows: First, the underlying conceptual foundation is developed by exploring Sun-Tzu's historical context. Second, a logical reasoning is offered as to why Sun-Tzu's teachings may be applicable to ERPM. Then, an attempt to map terminology between the *Art of War* and project management entities is offered as bridge to developing a model. This is followed by a discussion of three case studies and case analysis. In closing, the ERPM Five Factors of Analysis (working model) will be explained. The model serves as merely a novel first step to understanding ERP's complexity using a non-linear process. The paper's concludes with a discussion of its Implications and Conclusion.

As shown in Figure 1, Sun-Tzu's Five Factors consist of *Tao*, *Heaven*, *Earth*, *General*, and

Figure 1. Sun-Tzu's Five Factors of initial estimations



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