

Preface

Introduction

The role of information technology (IT) has becoming increasingly important in both private and public sectors over recent years. The advent of personal computers, information networks, and the Internet has engendered an information revolution, which has created new means of production, new communication patterns, and new work processes. The ability to buy and sell goods and services via the Internet has led to new private sector industries and new business and government models. Furthermore, there is an emerging realization that implementation of IT is more than just a shift in communication patterns or mediums. At least potentially, it involves a transformation of an organization's culture.

At the heart of the information revolution is the belief that technology can significantly improve existing standards, procedures, and processes, thereby increasing efficiency and effectiveness while reducing resource expenditures. Essentially, technology should enable us to work smarter, not harder. Consider the following statement by Herbert A. Simon, a leading futurist and technologist from the beginning of the computing revolution:

“[By 1985], machines will be capable of doing any work Man can do.” The promise of information technology has been widely received in the public and private sectors but the reality of the success of such technologies presents a contrary view.

Information technology has permeated the depths of the public and private sectors. However, successful adoption and implementation of technology has not been as mindless or easy as those futurists projected. Successful adoption and implementation of information technology can easily be defined as projects developed on time, on budget, and to the satisfaction of the end users. However, along with the myriad benefits and promises of technology, there are several challenges to its successful adoption and implementation, including poor requirements definition, lack of communication, and limited management support. However, a variety of identifiable and controllable factors can contribute to the successful adoption and implementation of information technology. These factors are often called *critical success factors* (CSFs) and they are the focus of this book. CSFs are those factors that consistently contribute to the overall success of a technology project, regardless of project scope, organizational size, or other exogenous variables.

Using a review of public and private sector literature, a list of fourteen critical success factors was developed. The critical success factors include:

- communication;
- highly qualified technology staff;
- use of reward systems;
- strategic planning;
- end user involvement;
- stakeholder involvement;
- project milestones;
- top management support;

- political support;
- use of prototyping and/or piloting;
- use of cross-functional teams;
- end user training;
- location of CIO in organization; and,
- sufficient financial resources.

Through the identification and measurement of these factors, it is plausible that organizations can further increase the likelihood of successful technology project design and implementation.

In addition to examining critical success factors in general, this research also looks at the differences in the public and private sectors with regard to success factors. Although significant research has been conducted in the areas of public and private information technology design and implementation, little attention has been paid to the sectoral differences that fundamentally alter the nature of IT projects and therefore influence the success factors needed in each sector. As described by Bozeman and Bretschneider's (1986) seminal article on public information technology, there is a substantial difference between management information systems (MIS), traditionally a private sector term, and public management information systems (PMIS). Some of the major differences noted include lack of market principles as primary decision criteria in the public sector; the role of economic and political authority; and the importance of transparency in the public sector (Bozeman & Bretschneider, 1986). Bretschneider's (1990) later research also found levels of organizational interdependence, "red tape", and that the position of the MIS director within organizations differs greatly between the public and private sectors.

Significant homage has been paid to the Bozeman and Bretschneider article in scholarly literature. However, the reality of the situation is that practice has not followed theory. The public sector has repeatedly copied

the practices of the private sector, evidenced by the current rise in popularity of enterprise-resource planning (ERP) and customer relationship management (CRM) software implementations in the public sector, which mirror the path adopted by the private sector in the past five years. Evidenced by the large-scale failures of many public sector technology projects, it is clear that strict adoption from the private sector does not work. Critical success factors, initially identified in the private sector and adopted by the public sector, must be reviewed in light of the public sector landscape and adjusted accordingly in order to facilitate successful public sector projects. Accordingly, this book offers theoretical explanations for both public and private sector adoption of specific critical success factors, as well as exploratory empirical evidence about the nature of critical success factors within each sector.

In summary, the purpose of this book is to examine the perceived importance of various critical success factors from the viewpoints of leading-edge public and private sector chief information officers. The book is divided into two sections. Section I includes an overview of the roles of chief information officers in Chapter II; theoretical justification for the critical success factors in Chapter III; and, an exploratory examination of a chief information officers' survey in Chapter IV. Section I ends with a brief discussion of implications and future research opportunities. Section II adds real-world experience to the theory and data found in Section I. It includes detailed interviews with several industry experts and offers enormous practitioner value from those who know the field the best.