

# Analysis of the Role of IT Governance on ERP Systems Implementation

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## ABSTRACT

An ERP (enterprise resource planning) is an information system that makes it possible to manage and monitor on a daily basis all the information and operational services of a company. It is able to effectively reduce the cost of products, improve customer service experience, and increase business competitiveness. However, the implementation rate of the ERP system is much lower than originally planned, and many companies have not achieved the intended objectives. This situation is due to many factors (high implementation costs, technical complexity, lack of well-trained employees, lack of incentive mechanisms, etc.), but the key element is the separation of relations between the ERP system and enterprise strategy, organizational structure, and business processes. The purpose of this paper is to examine the role of IT governance in achieving ERP performance with a focus on the implementation phase.

## KEYWORDS

Enterprise Resource Planning, Implementation, IT Governance

## 1. INTRODUCTION

ERP systems have become vital strategic tools in today's business world. An ERP system allows an organization to integrate all essential business processes in order to increase efficiency and maintain a competitive position (Nah, 2001). ERP initially covered all current transactions within an organization. However, it was later extended to external customers and suppliers (Turban, 2006). However, without a successful implementation of the system, the expected benefits of increased productivity and competitive advantage would not be forthcoming. One of the main problems in implementing the ERP system is aligning the relationship between the ERP system and the enterprise policy, organizational structure, business processes and business information (Gattiker, 2004), (Haines, 2004), (Nah, 2003), (Schimizu, 2004).

In recent years, IT governance has caught the attention of businesses. To enable companies to effectively integrate IT governance and business management, the Information Systems Audit and Control (ISACA) association published COBIT 5 in 2012. It provided a general framework of principles, practices and tools. Analysis and application models of IT governance applicable to managers, auditors and IT users, to help senior management and the IT department to strengthen the trust of individuals or groups related to the IT asset of advantage. The adoption of IT governance in an ERP environment by a company can reduce the risks and the costs of response because its information system is facing a change.

Risk management and control are considered essential in IT governance. Effective risk management can increase business opportunities and reduce potential losses. It must also achieve

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the objectives of the organization. The role played by shareholders in risk management is also one of the important factors for the success of IT projects (De Bakker, 2010).

The purpose of this study is to evaluate the impact of IT governance on improving the performance of ERP systems.

From the literature review in this study, we study the importance of IT governance for ERP systems.

## **2. LITERATURE REVIEW**

### **2.1 ERP Performance**

The key performance indicators for ERP systems are: quality of the system, quality of information, use of the integrated management system, user satisfaction, individual and organizational impact (Tsai, 2015). Organizations have ERP systems to improve their operational performance and profitability (Ruivo, 2014).

As a result, IT is increasingly seen as a tool to support management activities that involve making decisions about the complexity of organizational problems. The ERP system requires a large IT investment and its efficiency is complicated to examine (Carvalho, 2017). Organizations need to focus more on pre-trial IT governance to improve the performance of enterprise information management (ERP) software packages. IT governance will be built through decision-making, goal-setting and organizational capacity building for targeted goals and objectives (Chang, 2016).

### **2.2 Implementation of ERP Systems**

The ERP performance occurs in the post-implementation sentence. As a result, the post-implementation review process needs to be well managed (Motwani, 2010). The implementation of ERP can be considered a radical novelty and requires organizational change (Van Grembergen, 2005). The implementation of ERP is successful when the ERP becomes more complex to maintain its functioning after implementation (Chang, 2016). The subsequent implementation of ERP systems includes: an audit; ERP documentation and advertising success; success of the correspondence; success of the process; success of the interaction; expected success and comparative analysis (Devos, 2012).

### **2.3 Objectives and Performance of IT Governance**

(Tsai, 2015) proposed a model using the Balanced Scorecard to measure the IT governance indicator. It has four perspectives. (1) Perspective of contribution of the company. It refers to the maximum value created by an IT company for a company. This dimension can be measured by strategic alignment, value creation and risk management; (2) Stakeholders' point of view. This means that IT must be able to meet the expectations of internal and external stakeholders; (3) operational excellence perspective. It refers to the effectiveness and sustainability of IT governance. (4) Future perspective. It refers to the establishment of distribution channels for subsequent IT governance.

ISACA released COBIT as a core framework for IT governance in 2000. COBIT includes five dimensions: strategic alignment, value creation, resource management, risk management, and performance measurement. Later, ISACA published COBIT 5 in 2012 to guide businesses in connecting IT governance to management. COBIT 5 provides globally applicable principles, practices, tools, and analytical models as a framework and best practices for IT managers, auditors, and IT users. It assists business and IT managers in building the confidence of individuals or groups in the company's IT assets and maximizing their benefits.

### **2.4 IT Governance and ERP Systems**

IT governance and ERP systems become inseparable in deciding business process standards, regulations, and requirements. As a result, organizations with good IT governance have more effective

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