Chapter 11
A Framework to Perceive and Incorporate Information Technology Governance within the Agrifood Industry

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ABSTRACT

As competition shifts from the company to the intercompany Information Technology (IT) level, the concept of IT Governance (ITG) becomes one of the main factors driving the company's competitive advantage. Current definitions of ITG narrow its scope within risk mitigation and regulatory controls, and there is limited research on a wider grounding considering effects from change management, peoples' behavioral aspects, and external factors that alter an organization's smooth operations. As currently there is no literature on the experience of the agricultural sector on ITG practices, this research aims to define the concept of ITG within the needs of agricultural organization structures and operations. This study aims to develop a conceptual framework to apply an effective strategy for adopting and implementing ITG practices. Initially a generic strategy is proposed for adopting ITG principles. The perspective to apply this strategy at the agrifood sector is examined, and a framework to establish ITG practices within agricultural activities is designed.

INTRODUCTION

As competition shifts from the company to the intercompany Information Technology level, the concept of IT Governance becomes one of the main factors to determine the company's competitive advantage (Williams 2001, Weil & Ross 2004). ITG has been largely introduced after scandals, such as Enron, have raised the need for effective control and operations' transparency (ITGI, 2003).

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Legislation rules dictate the dependency on IT in order to achieve business operations' transparency and compatibility with auditory rules. Although in the past the majority of boards of directors have not been involved in IT strategy and governance activities (Nolan & McFarlan 2005), the increased need to counteract risk has been a trigger for directors to adopt and apply strategic IT functions (McCollum, 2006). IT Governance should not be confused with IT management, as it is driven by the corporate governance activities (ITGI, 2003; Brown & Nasuti, 2005; Nolan & McFarlan, 2005). The Information Technology Governance Institute defines ITG as the framework within which the IT adds value to a company and the overall strategy of risk mitigation is developed (ITGI, 2003).

The first step to effectively achieve risk mitigation is to review existing risk monitoring processes and policies. Using current regulatory initiatives and in-depth analysis of internal controls assist to form a viable foundation for reconsidering business risk methods (Knechel, 2007). Additionally, is important to explore the manner through which IT investments contribute to the corporate management's goals and assist the risk mitigation process (Gunasekaran, Ngai & McGaughey, 2006).

The examination of existing literature revealed a gap on the perception of ITG in the agrifood sector. Although there has been an extensive research on the way companies implement advanced IT systems (Argyropoulou, Ioannou & Prastacos, 2007 and Koh, Simpson, Pandmore, Dimitriadis & Misopoulos 2006) there has been no research on the adoption of Information Technology Governance concept and its implications.

The first part of this study is based on literature in order to explore the particular characteristics of the agrifood sector that affect technology and risk mitigation controls application. Literature is also used to examine the current view on corporate governance practices and current ITG activities. Based on selected literature, ITG is defined within business standards and regulatory policies. Building on the proposed definition an ITG adoption framework is designed based on conceptual analysis. Literature review is chosen as an approach to systematically identify the current framework of perceiving ITG. Because of the dynamic nature of ITG (Peterson, 2004), concepts related to the topic may not be described in the same terms in different pieces of literature (Fletcher, 2006). To overcome this obstacle a content analysis approach was initially adopted, in order to identify and use rules of translation (Colorado State Writing Lab, 2006), which would allow different terms with the same meaning to be categorized as a single term. However this approach was overruled as in many pieces of literature Information Technology Governance was perceived as IT management, hence it was not possible to categorize them under the ITG term.

The main limitation this study has to address is the lack of academic research in the topic, as ITG in its current form has emerged in the recent years following the need to comply with regulations for operational transparency. For this reason the qualitative approach of the research derives from empirical studies conducted in the industry.

The main objective of the current study is to explore the potential of ITG in enterprises and develop a strategic framework that will act as a guideline for companies to adhere to ITG principals. The research aims to build a complete and integrated strategy approach based on the main components of ITG. Risk monitoring and evaluation, IT systems performance and resource optimization are a few of the main elements to be considered in implementing a holistic framework for ITG adoption.

BACKGROUND

Information Technology Governance

The need to adhere to strict regulations has driven traditional organizational structures to