Governing Information Technology (IT) and Security Vulnerabilities: Empirical Study Applied on the Jordanian Industrial Companies

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ABSTRACT

The aims of this study is to evaluate information technology (IT) governance implementation using the COBiTs ‘maturity model, investigate the perceived Security Threats that face these companies and measures the causality between them. An Empirical Survey using self-administered questionnaire has been carried out to achieve the study objectives. The study results reveal that Jordanian industrial companies did not apply IT governance in its comprehensive methodology despite the implementation of some of its aspects. The study main recommendation for the industrial companies that it should give more attention to IT governance. Industrial companies Professionals should work more to increase the IT governance strength for all of its dimensions especially with the existence of negative causality relation between the IT governance and security threats frequencies.

Keywords: Control; IT Governance; Maturity Model; Security; Security Threats

INTRODUCTION

Over the last decade, an evolution of auditing and IT security occurred as an irreversible movement toward the “electronization” of the business process. (Greenstein and Vasarhelyi, 2000). As a result many efforts herein
appeared as increasing interest to evolve
the audit model toward a more action-
driven method of control, revision
Several professional committees have
undertaken this endeavor, such as the
AICPA. However, these initiatives were
in the form of general instructions, and
nothing specific can be considered as
detailed guidance to the auditors in
their work. Accordingly, the respon-
sibility has increased dramatically on
the profession, to recognize and assess
the threats which are associated with
Control Systems (CS) in the IT envi-
ronment. This partly due to the fact that
technology in many cases developed
faster than the advancement in CS,
(Ryan & Bordoloi, 1997).

In addition, knowledge advance-
ment in technology and related practices
in the current age verify that the right
practical employment is the key factor
of technology and knowledge success
(Oak Report, 2004). Enterprises realize
that growing importance of information
technology (IT) and consider it as a
treasure enhancing their competitive po-
sition, adding value to their businesses.
But what remains as a challenge is,
which key practices that organizations
should apply to get IT under control in
order to deliver that desirable value? In
other words what should be done govern
IT activities? (Li et. al., 2007).

The current study aims to find the
characteristics of IT governance in the
Jordanian environment by using a self
developed model that are suitable to
the domestic environment character-
istics since no one size fits all (Rau,
2004), then applying this model on a
sample from the Jordanian industrial
companies. In addition, this study aims
to investigate the security threats and
control vulnerabilities that face the
industrial companies. To date, little
experience-based research have been
conducted in Jordan and internation-
ally to investigate security threats and
what IT governance arrangement work
best (Weill and Ross,A, 2004), where
devising IT governance arrangements
is challenging because the success of IT
strategies and procedures is contingent
upon a variety of internal and external
factors (Bowen et. al., 2007).

RESEARCH BACKGROUND

Here below the theoretical discussion
is split into two main sections, IT gov-
ernance and Security Threats.

First Section: IT Governance

For many organizations, IT and IT
infrastructure that constitute major
investments, if not managed properly,
may impair and incur losses rather than
enhance the organization’s competitive
position, on other words, organizations
with effective IT governance have prof-
its that are higher than other companies
pursuing similar strategies. Moreover,
the lack of effective IT governance has
been shown to have adverse impacts on
organizations, such as business losses,
bad reputation, ‘runaway projects’, and
Privacy Rights Management: Implementation Scenarios
www.igi-global.com/article/privacy-rights-management/1304?camid=4v1a