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Board IT Committees and Firm Performance: A Review and Future Directions

Nazahan Sarhan[a*], Babatunji Samuel Adedeji [b], Hamed Khlifaa[c]

[a]*Universiti Technologi Malaysia,* [b]*Universiti Putra Malaysia,* [c]*Federal Board of Supreme Audit of Iraq*

Abstract

Scholars seem to agree on the significance of board members delving into Information Technology Governance (ITG). Still, just a few boards globally accept responsibility for governing Information Technology (IT), thus, creating a knowing-doing gap. Efforts are required to mitigate this gap by designing execution procedures for this form of involvement. One of the most often stated guidelines is the creation of an IT oversight or comparable committee at the level of the board. However, the study shows that insignificant boards have created such a committee due to the lack of thorough leadership on the mechanisms and duties of such committees. The focus of this paper is a review of IT oversight committees at the board level and the future direction required. We determine how IT oversight committees can be created and how they contribute to the board's functions about ITG and influence the performance of firms.

Keywords: board, board of directors, firm performance, information technology, information technology governance, information technology oversight committee

1 INTRODUCTION

Organisations are increasingly dependent on IT for both transformation and procedures. So, IT deserves a place in risk and strategy deliberations. Due to boards' involvement in strategy and risk management, the argument is that IT-related strategic decision-making and control are no longer to the board's benefit for full delegation. Indeed, more research calls are concerning the board members' involvement in IT governance (Bart & Turel, 2010; Jewer & McKay, 2012; Turel et al., 2017). In the meantime, research reveals that insignificant boards accept responsibilities for governing IT (Adams et al., 2010; Bart & Turel, 2010; Coertze & Von Solms, 2013; Valentine & Stewart, 2015). Hence, the view is a knowing-doing gap, indicating that boards are grappling with executing the prescribed governance functions. Nevertheless, few research energies are in place to close this gap through the execution guidelines.

ITG is a scheduling and oversight instrument for ensuring the governance of IT investments' transformation for corporate worth. ITG refers to: "the leadership and organisational structures and processes that ensure that the organisation's IT sustains and extends its strategies and objectives" (IT Governance Institute, 2003). Therefore, it delineates the decision-making team (e.g., the Chief Information Officer or Chief Executive Officer) and the BoDs (IT Governance Institute, 2003; De Haes & Van Grembergen, 2009). Meanwhile, many ITG research has emphasised management-level ITG (Ali et al., 2012; Bowen et al., 2007; Prasad et al., 2012). Thus, the literature on board-level ITG (B-ITG), board IT competency (BITC) and board IT committee (BITCo) has been very scarce and not popular (Jewer & McKay, 2012). However, concerning the present study, an attempt is made to review the literature on the association between board IT committees and firm performance.

*Corresponding author.
E-mail: alaa.z.mansour@gmail.com

The execution of an IT oversight (or similar) committee at the board level is one of the guidelines most commonly stated (Coertze & von Solms,2014; Nolan & McFarlan, 2005; Oliver & Walker, 2006; Posthumus et al., 2010; Read, 2004; Turel & Bart, 2014). Still, the practice seems not to have benefitted from this recommendation (Adams et al., 2010; Coertze & Von Solms,2013; Jewer & McKay, 2012). Therefore, an apparent inconsistency is between the suggestions put forward by academics and the existing practice condition. Again, research shows that although IT oversight committees are usually stated in ITG practice at the board level in academic research, not much information exists about their importance and mechanisms. Hence, the present study remains relatively shallow. In this paper, the aim is to enhance the ITG knowledge base from an IT oversight committee's operation and how these committees connect with the significance of the board about ITG and influence organisational performance. Hence, our study has drawn motivation from the following research question: Do Board Information Technology (BIT) committees influence firm performance?

The other aspects of this paper are structured as follows. First, a short explanation of IT oversight (or similar) committees is available at the board level and firm performance and an overview of the related theories applicable in the literature. Hypothesis development is next. The paper ends with a conclusion and areas for further research.

2 BOARD IT COMMITTEES

A feasible way out of having boards with a lack of IT knowledge is to engage IT-savvy board members. However, the implementation of the recommendation is not always an easy task. Several boards are unwilling to allow technologists who may only have IT the knowledge to have their ways. The facts support the latter view, as only 7.8% of firms prefer board members with IT experiences (Andriole & Bojanova, 2014). A study on Standard & Poor's 500 firms shows that IT-savvy directors occupy only 15% of new board positions (Spencer, 2018), translating to 1% of the total figure for directors.

Consequently, boards are encouraged to constitute an IT committee standalone (ITGI, 2003; Nolan & McFarlan, 2005). This is indirect to mitigate the threats of breaches of IT security. It is recommended that the IT committee consists of independent directors to be chaired by an independent director. The Standard & Poor's 500 firms have independent directors on audit and compensation committees independent directors' chairs. The IT committee needs to closely work with the audit committee on risk alleviation responsibilities. With over 80% of Standard & Poor's 500 firms having administrative structures, specifical managers in managerial IT positions, such as Chief Information Officer (CIO) and Chief Technical Officer (CTO), board structures (IT committees) comprised of only 4.4% to oversee IT issues. So, establishing more board IT committees can ensure the closure of this gap.

The most often stated method to enhance board involvement in ITG is the creation of an IT oversight or comparable committee at the level of the board (Coertze & von Solms,2014; Higgs et al., 2016; Nolan & McFarlan, 2005; Oliver & Walker, 2006; Posthumus et al., 2010; Premuroso & Bhattacharya, 2007; Read, 2004; Turel & Bart, 2014). Various terms are available to describe such a committee; board-level technology committee (Higgs et al., 2016; Premuroso & Bhattacharya, 2007), IT oversight committee (Coertze & von Solms, 2014; Nolan & McFarlan, 2005; Posthumus et al., 2010), ITG committee (Nolan & McFarlan, 2005; Oliver &Walker, 2006), IT steering committee (Read, 2004), and IT committee (Benaroch & Chernobai, 2017; Turel & Bart, 2014). According to Nolan and McFarlan (2005), such a committee should oversee what competing and other organisations are doing with technology on behalf of the board of directors. Posthumus et al. (2010) opine that the IT oversight committees need to certify that "IT is a standard topic on the board's agenda to be addressed through a structured approach." Furthermore, the committee ensures the board has all data necessary for decision-making about IT-related issues. Higgs et al. (2016) focus on threats and posit that the committee should be adequately motivated to detect, mitigate, and report IT-related concerns.

Presently, corporate governance rules do not favour the establishment of an IT oversight committee (Premuroso & Bhattacharya, 2007). Thus, some form of benefits exists for firms that encourage the deliberate creation of such a committee. That is, the prime-mover advantage (Premuroso & Bhattacharya, 2007) and signalling theory (Higgs et al., 2016) could promote the formation of an IT oversight committee, as it shows the firm's higher IT governance and signals the significance it ascribes to IT-related matters. Despite the pieces of advice emanating from these research outcomes to create a board-level IT oversight committee, the study points out that the launch of these committees in practice stands out as an exclusion (Andriole, 2009; Coertze & Von Solms, 2013; Héroux & Fortin, 2018; Jewer & McKay, 2012). Percent range was from 74.5% (Andriole, 2009) to 78.8% (Héroux & Fortin, 2018) and then 91% (Jewer & McKay, 2012) of respondents who indicate the absence of such a committee. However, Benaroch and Chernobai (2017) reveal that about 17% of the sample organisations had a board-level IT committee.

Likewise, practitioners interviewed (Andriole, 2009; Jewer & McKay, 2012) reveal that a couple of them do not favour introducing such a committee due to time restrictions or the view about not having the relevant skills. Undeniably, Higgs et al. (2016) posit that creating a board-level technology committee is luxurious because it involves board members' time, extra compensation, additional reporting and could threaten reputation and capital if risks materialise on the committee's watch. Therefore, the authors argue that boards might be hesitant in allowing such a committee's existence if the appropriate level of IT expertise is lacking. Coertze and Von Solms (2013) warn about the drawbacks of creating a committee at the board level. They cast doubts on the existence of a committee to the extent that boards remain answerable for all committees' actions.

Indeed, not all organisations need to establish an IT oversight or similar committee. The necessity for such a committee rests on IT's functionality in the firm (Coertze & von Solms, 2014; Nolan & McFarlan, 2005; Posthumus et al., 2010). Coertze and von Solms (2014) used a slightly different definition based on the belief of a defensive and offensive IT strategy, as defined by Nolan and McFarlan (2005). They opine that firms can emphasise an IT alignment range, moving to an aggressive position where IT is the business from a defensive posture where IT supports the company. Researchers submit that an aggressive IT strategy or situation needs a different IT oversight committee (Coertze & von Solms, 2014; Nolan & McFarlan, 2005; Posthumus et al., 2010). The risk management committee can use the defensive IT strategy or position to assume responsibility for IT governance at the firm's board level (Nolan & McFarlan, 2005; Posthumus et al., 2010). Another influencing factor for an IT oversight committee is the IT expertise within the board. Hence, boards limited in IT expertise might gain more from creating an IT oversight committee than those with adequate IT skills (Coertze & von Solms, 2014).

When organisations implement an IT oversight or similar committee, the board must engage its members and chairman, define its association with the audit committee, and put a committee charter in place. Independent directors should be members similar to other board-level committees such as audit or compensation committees for adequacy. Additionally, an IT expert with sound knowledge of the business requirements should be a member. Based on IT's degree of significance in the firm, the chairman should be an IT-savvy business executive or an IT expert. Also, the IT oversight committee requires a deep connection with the audit committee by, for instance, allowing the same person in both committees (Nolan & McFarlan, 2005). IT oversight or similar committees at the BoD's level appear to have a rather precise scope in practice. Nevertheless, Benaroch and Chernobai (2017), in their sample, identified the board-level IT committees to include: IS audit committees, which are often a subcommittee of the audit committee and monitor IT controls and IT risk management processes, IT steering committees which oversee the overall IT performance and the governance of IT resources, and the information security committees and technology and operational risk committees are the others.

Posthumus et al. (2010) specify the frequency with which the board-level committee responsible for IT governance should report to the board. As explained previously, the audit committee should adopt the defensive mode in going about their tasks in firms. More precisely, the audit committee should report to the board every six to twelve months for firms in support mode. In comparison, the factory mode requires a report every three to six months. IN AN OFFENSIVE MANNER, the IT oversight or similar committee in organisations should make their reports available to the board every three months.

The organisational performance determines an organisation's health based on economic, systemic, and social scopes (Zahra & Pearce, 1989). The financial performance sphere focuses on wealth sustenance and creation; the systemic performance dimension emphasises existence and growth. The social performance aspect considers organisations' reactions to societal prospects. In this study, a slightly narrower view is argued for, focusing on the financial performance aspect for two critical reasons. First, the social and systemic elements often transform into firms' bottom-lines and are shown in their economic outcomes (McGuire et al., 1988; Habbershon et al., 2003). Second, directors are more comfortable perceiving, mirroring, and reporting on complete financial performance in contrast to the other two.

The ITG committee and processes' essence increases the investment in IT; thus, IT investments predominantly produce financial settlements (Posthumus et al., 2010). This impact is because the IT governance committee's role satisfies the three criteria required for maintainable competitive advantage (Mata et al., 1995), with such a position producing enhanced performance (Nolan & McFarlan 2005; Higgs et al. 2016). First, the IT governance committee's role is treasured and can impact firm performance (Benaroch & Chernobai, 2017; Turel & Bart, 2014). Second, the IT expertise within IT oversight committees become distributed heterogeneously within competing firms. So, not every firm possesses this capability equally (Weill, 2004; Weill & Ross, 2004; Coertze & von Solms, 2014). Finally, the creation of an IT oversight or similar committee is imitable. That is not easy to change and requires learning on a long-term basis through trial and error (Mata et al., 1995). The potential

influences of various stages of the execution of an IT oversight or similar committees on firm performance have earned attention in several studies (Nolan & McFarlan, 2005; Benaroch & Chernobai, 2017; Higgs et al. 2016; Oliver & Walker, 2006; Posthumus et al. 2010). Therefore, this study's view is that the board-level IT committee's role in IT governance committees is underestimated, despite its influence on organisational performance.

The few empirical studies in this research area postulate that IT oversight committee at the board level improves organisational performance (Nolan & McFarlan, 2005) and points to definite contributions of IT to financial performance and non-financial gains (Jewer & McKay, 2012), irrespective of the IT use mode of the firm, profit orientation, organisation size, and sales level (Turel & Bart, 2014). Given the confirmed positive effects of board-level IT committees on organisations, this form of research denotes a new frontier, with the need for further exploration (Nolan & McFarlan, 2005; Turel & Bart, 2014).

3 THEORETICAL BACKGROUND

For an academic validation of ITG at the board's level, agency theory is the most broadly used philosophical view (Best & Buckby,2007; Mähring, 2006; Posthumus & von Solms, 2008; Yayla & Hu, 2014). The latter approach implies an emphasis on the board's monitoring role regarding IT. Based on corporate governance literature, agency theory is the most widely used to examine board-level IT governance (Benaroch & Chernobai, 2017; Best & Buckby, 2007; Mähring, 2006; Posthumus & von Solms, 2008; Yayla & Hu, 2014), providing attention on the overseeing function of boards about IT.

The IT governance committee is a body responsible for governing: "expenditure and realisation of benefits of current and future IT investments, standards, risk and compliance and performance." Many researchers also use the resource-based view of the firm (Turel & Bart, 2014; Turel et al., 2017; Valentine & Stewart,2015; Yayla & Hu, 2014) as a means to examining board-level IT governance, considering boards and IT governance committees as theoretically treasured resources for governing IT (Bart & Turel, 2010; Turel & Bart, 2014; Turel et al., 2017). Similarly, Jewer and McKay (2012) combined agency and institutional theories to determine the antecedents and implications of board-level IT governance. They argue that the board's engagement in IT governance is contingent on institutional pressures that impact the organisation and the strategic preferences the board itself makes. Also, because institutional theory suggests that industry norms affect corporate procedures via isomorphism (DiMaggio & Powell, 1983), entities favouring IT are likely to operate in a sector that depends heavily on IT, the industry norm encouraging higher board interest in IT governance. Lastly, stakeholder theory relates to board-level IT governance research, suggesting that the board has responsibility for the oversight by IT governance committees of the leading IT resources in favour of organisation stakeholders (Best & Buckby, 2007). These different theoretical paradigms imply several board roles regarding IT governance. The board has a control, service, and resource dependence role in governing IT, as is proposed in corporate governance literature (Johnson et al., 1996). Still, the board's involvement in IT governance is a function of numerous factors, including board decisions and institutional pressures.

4 HYPOTHESES DEVELOPMENT

The audit committee's primary duty is to monitor the financial reporting procedure with the fundamental purpose of enhancing the high level of financial reporting (SEC, 2003). The previous study generates proof that their features influence governance-based results. For example, the audit committee's independence concerns fewer earnings management (Klein, 2002), little earnings reaffirmations (Abbott et al., 2004) and a more negligible occurrence of fraud-related financial reporting (Beasley et al., 2000). Audit committees' active participation involves little SEC implementation activities, more minor earnings endorsements, and a lower frequency of fraud-related issues (Abbott et al., 2004; McMullen & Raghunandan, 1997).

The audit committee's duty is significant to firms' internal controls concerning financial reporting procedures, apart from its improvement of corporate governance in standard terms and its real contribution to the enhancement of internal control. Additionally, IT needs technical discernment above other disciplines to comprehend how IT contributes to sustaining the value and ensuring risk reduction. Therefore, audit committees are likely to monitor. IT controls appropriately respond to IT drawbacks when they comprise members with good IT experiences. Li et al. (2007) opine that IT experienced audit committee members and aid firms with IT-informed internal controls.

Many of the IT governance study has suggested the adoption of board-level IT Strategy Committees, IS auditing committee, information security committee or technology and operational risk committee to fast track the processes for executive team decision making efforts (e.g., IT Governance Institute, 2003; Nolan & McFarlan, 2005; Wilkin & Chenhall 2010; Weill & Ross, 2005). However, as other research has established (e.g., De Haes

& Van Grembergen, 2005; Ernst & Young, 2006; Huff et al., 2006), the studies by Jewer and Mckay (2012) also opine that most boards do not have such committees, a majority (91%) of the respondents in their survey agreed that their boards do not have the committees. The latter further confirms the essence of the institutional theory that views every firm as a product of rules, regulations, norms, and pressure groups since at the heart of every social formation is an organisation. The establishment of the committees is an attempt to conform to societal demands for meeting up the various stakeholders' needs. Therefore, based on those above, the following hypothesis is developed:

Hypothesis 1a. Firms with extensive audit committee members and IT experience are positively associated with financial and non-financial performance.

Hypothesis 1b: The establishment of IT committees is positively related to financial and non-financial performance.

5. CONCLUSION

This research aimed to create awareness for IT oversight (or similar) committees at the level of the BoDs. More explicitly, it provided insights into such committees' functions and style of operations. It is concluded that an IT oversight committee could assume various roles based on the organisation's desires. Still, boards can implement their controls, services, and resource dependence responsibilities through such a committee.

Nevertheless, the review does not emphasise B-ITG and board IT competency. Thus, future studies need to focus on this direction. Also, a quantitative approach can be adapted to determine the extent of the relationships between the number of audit committee members and IT experience and firm performance, on the one hand, and the establishment of IT committees and firm performance on the other side.

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