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Awareness and Practices of IT Governance in an Insight of UAE Various Management Perspective

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Abstract: In an Asian region receives an attention of IT governance in every aspect also corporate governance are getting more priorities. Although today's business processes make IT mandatory, IT governance (ITG) does not seem to be given much credibility. Awareness and activities of ITG do not seem to be widespread in the region. Using data from a sample of senior management from the Middle East especially in the UAE organizations, a study was conducted to determine the awareness and practices of ITG. Contrary to observation, UAE businesses were found to be aware but implemented ITG. There was a positive correlation between the two concepts. Although the association was not causal, it did reveal a potential tendency for sensitization to subordination in a work environment. Senior management commitment and involvement, oversight bodies, and a focus on creating tangible value for real shareholders ITG practices can also be reinforced through real-world problems experienced by organizations, such as the strategic deployment of IT to incorporate it into the real business environment. The paper includes intercultural aspects in IT business presenting results of study on current and significant topics concerning human resources, management, strategic planning and corporate organizations.

Keywords: awareness, practices, IT business, governance, management, intercultural aspects.

Introduction: In line with the call for corporate governance, transparency, accountability and disclosure were discussed and publicized in Ruler's Office Administration (2005). Since the turn of the millennium, some countries in the Asian region have either issued corporate governance codes of practice or disclosed their governance developments, that is, the UAE council on corporate disclosure and governance was issued in August 2002 and the corporate governance formed the Corporate Governance Committee in March 2004. Also, increase awareness and practice of good corporate governance in UAE on 2005.

In the case of the latter, in addition to addressing the weaknesses in corporate governance practices evident during the 1997 Asian financial crisis of corporate reform was introduced to enhance the quality of good corporate management practices. However, although these codes or developments help organizations adopt corporate governance, there is little mention of information technology governance or IT governance. IT governance is one of the sub-disciplines of corporate governance as it considers IT as an integral part of any corporation or organization.

Several definitions of IT governance exist, but the most commonly accepted are the IT Governance Institute (ITGI), AS8015-2005 Australian Standard for Corporate Governance of Information and Communication Technology (ICT), citation by Weil Rose (2004). [1] IT governance is concerned with the alignment of IT resources to organizational strategies and objectives, the performance of IT related to value delivery and risk mitigation, and the conformance of IT processes to best practices (ITGI, 2003). [2] A key finding from the IT Governance Global Status Report 2003 (ITGI, 2004) [3] indicates that IT governance in Asia Pacific is the lowest compared to the rest of the world. Countries participating in this survey were Japan, Hong Kong, Indonesia, Australia and Singapore for the Asia Pacific region, while the rest of the world was represented by the United States and Europe. Despite some media coverage and an increase in the number of conferences and workshops focusing on IT governance, IT governance awareness and practices among businesses do not appear to be widespread in the Asian region.

It is known that few studies have been conducted on IT governance in the UAE and there are few awareness studies on IT governance from the UAE's perspective. Drawing attention to corporate governance, an insight into IT governance from the UAE's senior management perspective was deemed appropriate. Moreover, findings from a study on corporate governance in a sample of different UAE companies

A positive relationship between corporate governance practices and company performance has been revealed (Gold, 2008). [4] With improved company performance from corporate governance practices, the potential for investor confidence is better. Similarly, increased IT performance through better IT governance practices contributes significantly to the realization of IT investments with improved operational costs and client relationships, and business process efficiency gains (ITGI, 2003). [5] The purpose of this paper is to present empirical findings on the awareness and practices of IT governance among UAE's businesses. Additionally, findings on the relationship between IT governance awareness and practices are presented. These findings contribute to the research base on IT governance, it will provide an insight into governance

awareness and practices from a UAE's perspective and highlight areas for improvement. The purpose of IT governance is to direct IT efforts to ensure that IT performance meets the objectives outlined in its strategy.

Essentially, these goals are the realization of the promised benefits as a result of the alignment of IT with the organization, the exploitation of opportunities, and the maximization of benefits from IT enabling organization, the responsible use of IT resources (Journal of Business Systems, Governance and Ethics Volume 5, Number 1) appropriate management of IT-related risks (Chalaris et al.2005 ITGI, 2003). [6] Senior management needs to provide better assurance that the organization's IT is meeting deliverables. Rather, it focuses on the process of managing and managing an organization's IT system, which is where IT governance is important. Also, with effective governance, the return on IT investment can be high and this business investment in IT can be optimized to further business strategies and objectives. Studies from Weil and Ross (2004) and IT Governance Global Status Reports (ITGI, 2006 [7]; ITGI, 2008 [8]) support these claims. For IT to be governed the need for governance must be recognized and responsibility for IT-related decisions must shift to the top of the organization.

A review of the literature on IT governance reflects a general consensus that IT governance is a key management concern (Johnson, 2005 [9], Luftman et al, 2004 [10], Read, 2004 [11], Hardy, 2002 [12]). It is important for senior management to have a working knowledge of IT governance concepts and issues. Effective governance of IT as IT significantly affects the business of an organization. This can be seen when IT adds value to the organization by aligning IT initiatives with organizational strategy and mitigates risks by establishing accountability and monitoring of IT performance (Read, 2004 [13], ITGI, 2003 [14]). Post literature on IT governance has focused on the domains of IT strategic alignment, IT resource management, risk management, performance measurement, and IT value delivery. These five domains have gained global recognition as relevant domains for ITG because they are business driven and align closely with the issues on which the board and executive management are focused (John, 2005). [15] In addition, they represent five management-related issues related to IT governance responsibilities (ITGI, 2003). [16] To determine the awareness and practices of IT governance among local businesses, these domains were adopted for the study.

Academic research on UAE IT governance is not very limited, while most of the previous research studies are internationally oriented. This is because an examination of students' awareness and practice of IT governance was timely as the findings provided an insight into the state of governance among UAE businesses from the perspective of senior management designees.

Domain description of IT governance

(1) IT Strategic Alignment

This domain focuses on ensuring the linkage of business and IT governance plans, defining, maintaining and validating the IT value proposition and aligning IT operations with enterprise operations. (Buchta et al 2007) [17] ITGI (2005) [18]

(2) IT Resource Management

This domain focuses on key issues related to optimization of knowledge and infrastructure. It involves optimal investment and proper management of critical IT resources (such as people, processes, applications, infrastructure, and information) to meet organizational strategic goals. Bohlen (2006) [19] ITGI, 2005 [20] ITGI (2003) [21]

(3) Risk Management

This domain includes senior management risk awareness, a clear understanding of the organization's ability to manage risk, Focuses on transparency about significant risks to the enterprise and embedding risk management responsibilities within the organization. ITGI (2005c) [22] Luftman (2004) [23], Hardy (2002) [24]

(4) Performance measure

This domain uses approaches such as balanced scorecards and maturity models to track and monitor strategy implementation, project completion, resource utilization, process performance, and service delivery. ITGI (2005d) [25] De Haze and Van Greenberger (2004) [26]

(5) IT value delivery

This domain implements the evaluation of the delivery cycle and delivers the promised benefits against the IT strategy, focusing on optimizing costs and proving the inherent value of IT. ITGI (2005e) [27], Haymaker (2003) [28] ITGI (2003) [29]

(6) Research methodology

An empirical study was applied in this research using a questionnaire as a research instrument. Both primary and secondary data were used to achieve the objectives. The domains of IT governance were determined from previous research and used to determine the awareness and mechanisms of IT governance among Malaysian businesses. The content of the research instrument was validated through feedback from practitioners experienced in the subject. Reliability tests were conducted on (i) a set of 20 awareness items and (ii) a set of 15 practice items in the questionnaire. Results showed high alpha readings ($\alpha > 0.9$) for both item sets, indicating that both sets of measured items were good. Contact details of 150 organizations were obtained through web business directories. Convenience sampling was applied in primary data collection using electronic and postal mails. Senior management officials were the target.

Analysis of primary data was supported by the application of appropriate statistical techniques.

Model of the research

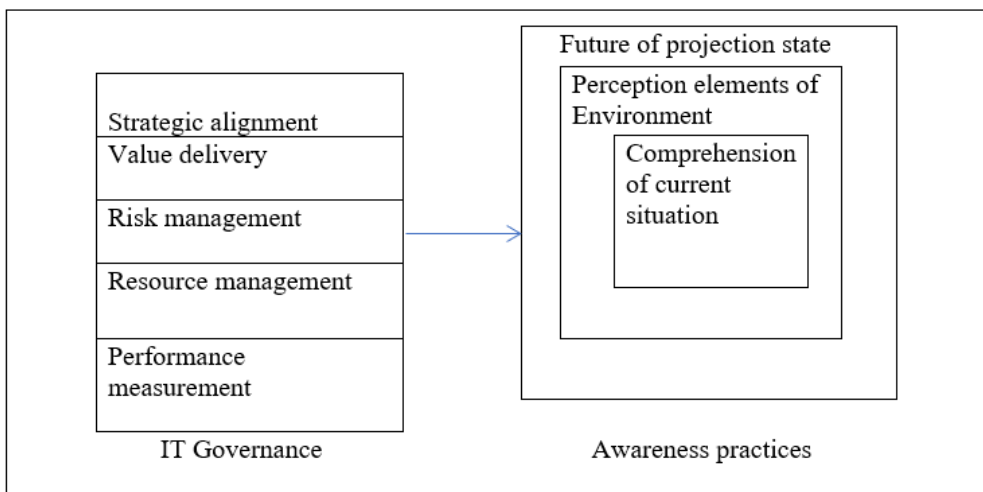
A research model was developed focusing on the cognitive elements of IT governance. Ensley's situational awareness model (1995) [30] was adopted for this research model. According to Ensley (1995) [31], situational awareness (SA) consists of perception of elements in the environment in temporal and spatial dimensions, understanding of their meaning, and projection of their status in the near future. This definition is accepted because it applies across multiple task domains. Although frequently used for military-related studies (French and Hutchinson, 2002 [32], Ensley, 1998 [33]), The SA model is applicable to complex systems such as business supported by IT/information systems (Lee et al, 2003 [34], Ensley, 2001 [35]). Understanding people's awareness of how and to use the information around them can help support the delivery of effective performances. Senior management should utilize SA to ensure that they make well-informed decisions that lead to effective planning and accurate formulation of the organization's future goals (Miller 2006 [36], Resnick 2003 [37]). Having an accurate understanding of the current situation is essential for making business leadership decisions. The influence of SA information on decisions made as a result has been found to have positive effects (Lee et al, 2003). [38] The research model was constructed based on the integration of several previous literatures rather than a single research model. This model focuses more on process and perception, and proposed a three-level concept of awareness of comprehension and projection. Application of levels of awareness in the domains of IT governance, from the perspective of senior management, through the frequency with which processes are performed used to measure management's awareness and understanding of IT governance.

Senior management gathers perceptual information from the operating environment and selects the elements most relevant to the task at hand. In the context of IT governance, risk management addressed by senior management, the availability of resources to meet new tasks and the organization's strategic goals, Some of the processes related to this level of awareness are lacking, such as infrastructure, skills, regulatory compliance, and inclusion of IT in the board's agenda. Also, such as improvements in client relationships, operating costs, business efficiency gains, and achievement of the organization's strategic goals. Close monitoring of IT investment is provided through tangible and intangible assets pending and acquired.

At the comprehension level, senior management must be able to integrate incoming perception information with existing knowledge, revealing an understanding of the importance of these factors in the current situation. From an acute, IT governance perspective, the understanding from respondents can be

derived from senior management's recognition of the important role IT plays in the organization, As a result controlled monitoring of IT for return-on-investment (ROI) and frequency of decisions about IT usage made jointly by business and IT management. Senior management concerns focus on risks and ways to mitigate them, while leveraging potential developments in IT for business growth and leveraging its know-how to increase shareholder value.

The projection level of awareness is achieved when senior management is able to project the future actions of elements of the operating environment by predicting and anticipating how incoming information will change the environment. To determine the projection of sample segment related to IT governance, senior management appropriate IT resources, infrastructure and strategic objectives of the organization. Issues such as skills to fulfill and strategic initiatives to manage the critical value of IT must be addressed leveraging IT's potential contribution to business growth through participation in organizational change-setting and strategic direction.

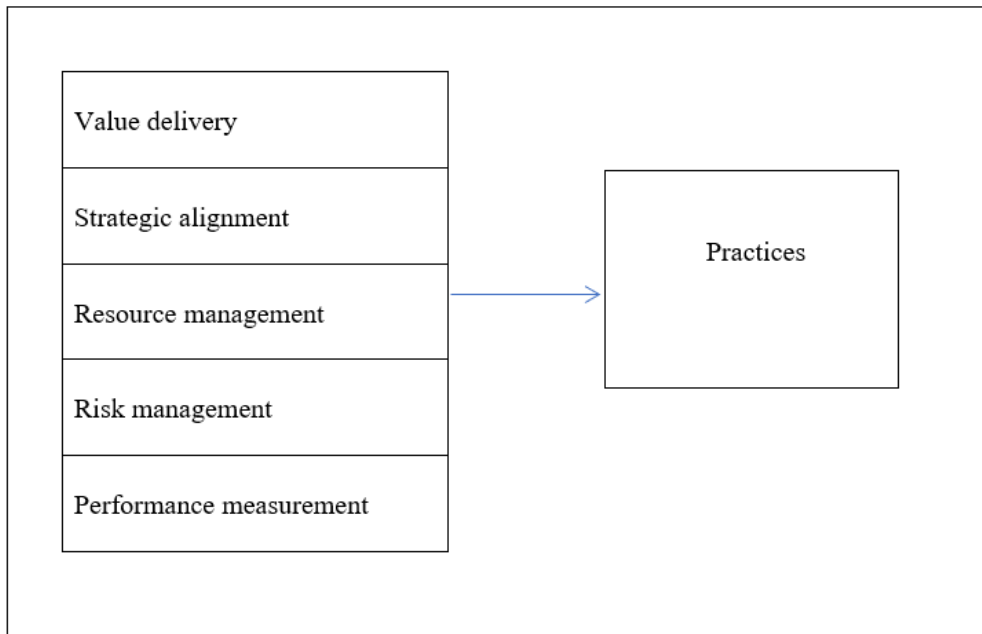


Awareness of IT governance in the research model

The researches hypotheses H1 to H15 are formulated based on the research model are listed. The hypotheses were generated to test positive associations between each awareness level and each domain of IT governance. Each hypothesis has a null hypothesis that is tested to be unrelated. To determine IT governance practices among businesses, a research model was developed based on previous literature, as depicted. Review the strategic role of IT, its alignment with organizational goals, security measures between business and IT functions, Monitor security measures between business and IT operations, Monitor opportunities between business and IT operations, Audit of IT processes. The in-

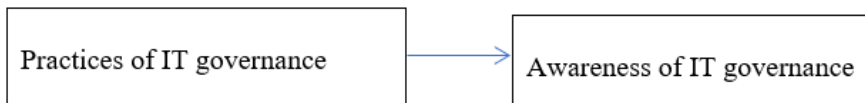
volvement and support of senior management in IT governance can be seen from the work done by these processes. The application of activities in the domains of IT governance was used to measure the management practices of IT governance through the frequency with which the activities were performed. The frequency of practice processes is based on senior management perspective.

Based on the research model, research hypotheses H21 to H25 were formulated to examine the positive relationships between practices in each domain of IT governance. Each hypothesis has a null hypothesis that is tested to be unrelated.



Practices of IT governance research model

Meanwhile, a research framework for the relationship between IT governance awareness and practices correlated computation will determine the linear relationship between awareness and practice concepts.



Findings and data analysis

The survey captured the background data of the respondents' profile and their opinion regarding the awareness and practices of IT governance in their

respective work environment. Out of 150 sets of questionnaires distributed by invincible sampling, only 38 people answered, a response rate of about 25%. This rate is considered relatively normal (Schaeffer et al, 1996). [39] The main reasons given for non-response were (i) the company's policy of not responding to surveys, and (ii) the nature of the study in question and the level at which it was focused. Most of those targeted are within the state of Selangor and the Federal Territories. They are mainly senior management designs such as board or C-suite members (i.e., Chief Executive Officer, Chief Information Officer, Chief Financial Officer etc.)

Demographic details

The sample data included members of the board or C-suite (57.9 %) while the rest (42.1 %) held senior management positions such as senior manager, executive and advisory offices.

In terms of the number of years the respondent has held the position, 36.9% of respondents reported being current for at least 6 years, and 63.2% for less than 6 years. Most of the respondents were from the private sector (78.9%), followed by 21.1% from government-linked companies (GLC), semi-government institutions and various media super corridor (MSC) status companies. 21.1% of the sample is from the IT (consultancy/services/vendor) industry and 15.8% from the banking and finance industry. The rest of the responding organizations are from the retailing, manufacturing (related services), telecommunications, logistics, engineering and construction industries. At least 50% of respondents' organizations are medium to large. Most of the responding organizations are very mature with 73% having been established for more than 10 years. Only 16% work for 5 years or less. Some form of governance may be implemented at the beginning of operations, but cannot be avoided because it is not formalized by name.

Factor analysis and results

Bartlett's test of sphericity and Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy were performed to test the factorability of sample data for intuition and training. Bartlett test found significant (p -value < 0.05) and KMO measure greater than 0.6, thus, factor analysis is supported.

Factor analysis results from the cognitive data resulted in five valid factors of IT governance: strategic alignment, resource management, risk management, performance measurement, and value delivery. These reliability measures for each factor were all above 0.7 n , indicating that the internal consistency of the measured items was good. These factors are suspected to be the basic domains that determine awareness of IT governance. Using only valid factor loading, mean scores for awareness of IT governance were calculated using the sample mean statistic.

The rating scale used for the three levels of awareness was a 5-point Likert scale measuring frequency of occurrence (1 = don't know; 2 = never; 3 = rarely;

4 = often; 5 = always). One observation about the results is that there is a high potential frequency of awareness processes from the perspective of the respondents. At the perceptual level of awareness, attention is focused on the elements of governance most relevant to the task at hand. Increasing incidence of processes related to perceptual information about governance from the environment the mean scores on the perception level of awareness are reasonably high with an overall mean of 3.782 indicating Comprehension level, which includes understanding of existing governance domains, it also includes an understanding of the importance of these domains in the current context of the organization's goals. The overall mean of awareness level was 3.770, integrating this perception information with existing knowledge into awareness of this perception, and understanding how it affects the organization's goals, and re-envisioning processes that point positively to incremental events. Projection is the highest level of awareness, involves perception and comprehension, and is achieved when future actions related to governance domains are projected onto the respondent's environment. The overall mean of 3.756 indicates that, from the perspective of the respondents, the processes related to the projection of IT governance domains are seen as increasing. Mistake, Perception, Comprehension, an extrapolation of the results of the projection and the sample data led positively to the awareness of IT governance in the work environment of the respondents.

Meanwhile, the results of factor analysis on practice data indicate three valid components of IT governance: risk management, performance measurement, and value delivery. The reliability measures of the items for each factor were all above 0.7 n, indicating good internal consistency of the measured items. These factors are suspected to be the fundamental domains of IT's activities rule is fixed. A summary of the mean IT governance scores derived from the valid factor loadings is mean scores for the strategic alignment and resource management domains were not calculated because these factors were considered invalid due to insufficient factor loadings. However, this does not mean that strategic alignment and resource management practices are completely absent in the local business environment. As the sample size should be relatively small with training in two domains it is also possible that relevant information is lacking. Unfortunately, factor analysis was unable to confirm the validity of either factor.

The overall mean of 3.680 indicates that there is some level of IT governance practices from the respondents' perspective. The mean scores for the three governance domains are high, indicating an increased incidence of practices in these domains. However, lack of validity for strategic alignment and resource management indicates local understanding of IT governance practices. That is, the focus is on evaluating the return on investment in client work using the Security Investment Factor.

Correlation analysis & its results

A bivariate Pearson product-moment correlation test was performed on the research hypotheses generated for governance awareness. The correlation coefficient (r) is derived from the following statistics, the results of the hypothesis tests indicated strong and positive correlations for all 15 hypotheses tested. Relationships between awareness levels and areas of IT governance were also indicated to be significant. Therefore, the higher the awareness levels, the higher the domain processes.

Correlation tests were conducted on research hypotheses for positive associations between the awareness concept and domains of IT governance. The results of the hypothesis tests indicated strong and positive correlations for all 5 hypotheses tested. In addition, there were significant relationships between the awareness concept and governance domains. As a result, an increase in awareness concept sees an increase in IT governance in the operational environment. It was observed in this phase of the analysis that UAE's businesses' management awareness of IT governance from aspects such as strategic alignment, resource management, and risk was demonstrated, management, performance measurement and value delivery. This is an interesting finding, as IT governance is a valuable subset of corporate governance.

A product-moment correlation test was conducted on the research hypotheses generated on governance practices. The results of the hypothesis tests shown indicate strong and positive correlations for the 3 hypotheses tested. The practice concept of IT governance also indicates a significant relationship between the three domains. As a result, best practices concept, risk management, performance measurement and value delivery domains of IT governance in operational environment.

While the results show a positive correlation between the practices and the three governance domains, the strategic alignment and resource management domains lack due to low probability events and relatively small sample size. The management concerns of local businesses are now being addressed by IT. Thus, in practice, as the company's IT is secured using elements of risk management tools or techniques, A further concern for the company was that IT was performing up to expectations. Immediately, value is extracted and the customer is satisfied to some extent when IT projects are completed and delivered. From the results of the data analysis in this section, it seems that the management of local businesses only partially practiced IT governance, in which specific governance domain practices were carried out more than others as mentioned, IT governance awareness was found to be there and judging from the comments of the respondents, there seems to be room for improvement in the practices of IT governance because processes may be limited or under development and therefore not used to their full potential. This is due to lack of expertise. In retrospect, the public

mind of local businesses seems to be attuned to the benefits of technology as a commodity or support tool rather than a strategic tool. According to a key observation of the IT Governance Global Status Report 2003, rather than being a means of achieving competitive advantage, In the Asia-Pacific region there is a tendency to treat IT more as a commodity. Relationship between concepts of IT governance awareness and practices referring to the figure, the correlation test is performed on the generated hypothesis and the result of the relationship between IT governance awareness and practices is shown.

This hypothesis was tested using the valid factor loading values of each concept. Hence, awareness is likely to increase with increased practices of IT governance. There is a good relationship between IT governance awareness and IT governance practice concepts as an awareness of IT governance, the logic of the situation lends itself to its practices in an organization. An interesting observation reported in the 2003 and 2006 IT Governance Global Status Reports was that the majority of respondents not only practiced governance practices, but also “hidden” governance practices that were not depicted or labeled as such. Namely, the Control Objectives for Information Technology (COBIT), the Information Technology Infrastructure Library (ITIL), and BS 7799-1/ISO/IEC 17799:2000 (Code of Practice for Information Security Management) (also known as the Model Security Management MNOM). Sometime however, organizations with similar governance or security awareness may inadvertently incorporate either related governance processes into their regular operating practices or a framework for compliance purposes seems to be combined. Currently, with the release of the ISO/IIC 38500:2008 standard (www.iso.org) for corporate governance of IT, the efficient, effective and acceptable use of IT in organizations is promoted. Organizations should consider following its guidelines to assist top management.

Findings and summary

In summary, the findings in this study seem to support the general results of the IT Governance Global Status Report 2008 in terms of governance awareness and practices.

Global awareness of IT governance has increased, with more respondents reporting that several ad hoc measures are in place in their organizations to increase awareness, but there is a need to further improve governance practices (ITGI 2009a ITGI 2008). [40] A pattern of senior management responses in this study, understanding of the situational awareness model in five areas of governance, the presence of consciousness is demonstrated through the application of the perceptual and projection levels. However, the regime is only partially implemented; this indicates the need for further improvements in this area with

more emphasis on strategically managing and leveraging technology to drive business growth.

Discussion and conclusion

Based on a 25% response rate due to the nature of the study, this study gives an indication of what is happening to some local companies. Positive correlations were found between awareness concept and five domains of governance, while only three domains were found to be positively associated with practice. Furthermore, a positive correlation was found between awareness and practice concepts, and although the association was not causal, it revealed a potential tendency for awareness to trickle down to practices in an operating environment. However, an issue of concern from the results of the study's findings was why the study's concept of IT governance practices could not be validated for all domains. As strategic alignment and resource management are not evident in the findings, management is aware but in practice, other factors may contribute to management cascading the full potential of all governance domains into the operating environment to leverage technology for business growth viewing technology as a commodity or support tool rather than as a strategic tool to leverage and extend business strategies and objectives. This reflects the view of most businesses in the Asia-Pacific region (ITGI 2004). [41] Sustaining a business through tough financial times and a volatile global economy did not provide an ideal environment for companies to focus on taking proper governance measures. Other factors may include technological, legal, political, social, and environmental factors that affect business operations, or the culture of a business that only cares about what is relevant to making a profit. IT governance practices can be improved by applying real-world problems experienced by organizations. The assimilation of such real experiences can strengthen IT governance and continuously improve its five domains. (ITGI 2009). [42] Because IT governance is a subset of corporate governance, the strength of an organization's IT governance initiative can influence overall corporate governance. Realization through the power of environment is very reliable. Thus, senior management commitment, participation and principles to provide guidance and clear roles Allocating responsibilities Accountability for implementing IT governance and continuous improvement of the organization is critical to its success (Weil and Ross, 2004 [43] ITGI 2003 [44]). Establishing relevant committee(s) with positive representation from senior, business and IT management will provide the necessary mechanism for IT governance oversight and suggestion for improvement (ITGI, 2009b, [45] Posthumous and von Solms 2005 [46], Lientz and Larsen 2004 [47], De Hass 2004 [48]). Future research may be conducted to identify the contingencies that influence the functioning of governance domains. An issue of interest is to examine the severity of IT-related

problems in the operational environment and examine its relationships with awareness and practices of IT governance. This research extension is currently ongoing and may provide further insights into IT governance among UAE businesses.

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