Firms' Financial Performance in Age of Competitiveness: The Role of IT Governance

Adnan Anwar[1], Sahar Qabool[2], Atif Aziz[3], Muhammad Kamran Khan[4]

[1] College of Management Sciences, Karachi Institute of Economics and Technology, Pakistan.
 Email: adnananwar99@yahoo.com
[2] Assistant Professor, College of Management Sciences, Karachi Institute of Economics and Technology, Pakistan.
 Email: sahar_qabool@outlook.com
[3] Associate Professor/Head of Department, College of Management Sciences, PAF - Karachi Institute of Economics and Technology, Pakistan. Email: atifraj2001@gmail.com
[4] Assistant Professor, Department of Political Science, University of Karachi, Pakistan. Email: kamranku2@yahoo.com

ARTICLE INFO	ABSTRACT
Article History: Received: May 06, 2022 Revised: June 20, 2022 Accepted: June 27, 2022 Available Online: June 30, 2022	Over the past decade, fierce competition in the turbulent business environment has witnessed new business modifications. These new modifications have motivated organizations to deal with new challenges and business risks proactively. In the prevailing competitive environment, organizations' survival depends on adopting new business models and IT Governance. Firms with adaptability, resources, and motivation to adopt and implement new business models would have sustainable growth. Moreover, such firms would have leveraged against business risks and the potential to benefit from upcoming opportunities. The citation pearl growing method is used to analyze earlier studies for better insight into IT governance and lay down theoretical implications, practical implications and future directions for the policymakers and academicians.
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1.   Introduction

IT governance is a set of rules, procedures, structures, and guidelines related to information technology that organizations adopt for smooth operation and value-addition of businesses (Mikalef, Pateli, & van de Wetering, 2021). The board of directors or chief executives develop these rules and guidelines. They also ensure that the organizations implement IT rules and regulations for achieving organizational objectives (Al-Hila, Alhelou, Al Shobaki, & Abu Naser, 2017; Otto, 2020). Researchers do not have a consensus definition of IT governance mainly due to its volatility, obligation, and perception. Nevertheless, organizations deal with the new challenges while implementing IT governess (Rădulescu, Bodislav, & Burlacu, 2018; Rubino, Vitolla, & Garzoni, 2017). However, firms fail due to various internal and external factors, despite implanting new policies and procedures. However, if all the stakeholders of an organization are motivated to implement IT governance, the firm would be able to implement it successfully (Rubino et al., 2017). Researchers have categorized different definitions of IT governance into

five domains (i.e. (Strategy, Technology, Organization, People, and Environment) and abbreviated it as "STOPE." Many firms have integrated all these domains to resolve specific and complex IT-related issues.

Additionally, firms can also use it for adopting new IT reforms. Extant literature suggests several models of IT governance (Al-Hila et al., 2017; Ferreira Da Silva, Araújo, & Dornelas, 2020; Salehi, Abdollahbeigi, & Sajjady, 2021). However, all these models may not apply to all the organizations since their structures and size values are not the same. Moreover, the protocols and values of public and private sectors are significantly different, especially in developing countries. Thus it may be difficult for them to implement the whole model. However, organizations may adopt the model's portion that aligns with their requirements (Ferguson, Green, Vaswani, & Wu, 2013; Ferreira Da Silva et al., 2020). To deal with the emerging challenges, many firms invest 50% of their capital in IT Governance (Tawafak, Romli, Malik, Alfarsi, & Jabbar, 2021; Van Grembergen & De Haes, 2018). However, despite the huge IT investments, several firms' organizational performance has not increased significantly. One of the reasons for such a failure is organizations' slow migration toward IT orientations (Zhen, Xie, & Dong, 2021). The current study aims to synthesize literature on IT governance. With the help of in-depth analysis, the study presents the evolution and advancement in information technology and governance.

The study is based on the literature review, which has identified an exemplary shift in the paradigm of IT governance. Subsequently, the initial phase of the study has revealed the models applied in today's businesses in IT governance through the literature review. The study has discussed the pattern of framework adopted by different researchers. Furthermore, it has discussed and compared different methodologies used in past studies. Finally, the study has presented the future of IT governance.

2. Literature Review
2.1 Relational Analysis

The current study has explored three specific and core areas through relational analysis from the articles published on IT governance during the last ten years. First, a review of 100 articles has illustrated that most studies have explored the critical factors that successfully impact IT governance. Many of the same articles have described and discussed the implementation of new reforms in IT governance. Out of these 100 articles, 27% of articles are on the integration of IT governance, and 53% of the articles have discussed the causal relationships between the variables that significantly impact IT governance implementation. And the rest 20% of the articles have focused on the perception of IT governance.

2.2 Adaptation and IT Governance

Most articles and literature on IT governance did not use a single standard measure to examine organizations' efficiency and performance. As a result, task-oriented organizations are still facing challenges in adjusting to IT governance or new reforms related to IT. Such a lack of adjustability affects organizational business activities (Chau, Ngai, Gerow, & Thatcher, 2020; Chergui & Chakir, 2020). For an organization seeking to adopt IT governance or new IT reforms, its adaptability and willingness depend highly on its requirements. These requirements include (i) Adoption of IT planning tool for aligning IT with the objectives of the organization, (ii) Procuring and acquiring IT services & resources transparently, (iii) Maintenance of secrecy of information security, (iv) Personnel management of IT staff (v) Monitoring and evaluation of IT performance. In addition, internal and external business environment factors affect

organizational performance. Adopting governance helps firms to deal with these environmental factors.

One of the biggest challenges many organizations face is the lack of the specialized skills necessary to adapt IT governance. The organization's size variation in business activities is another internal factor hindering IT governance adaptation. In addition, many organizations employ low-skilled personnel to reduce the labour cost, which is also a hurdle in adopting IT governance (Alpar & Reeves, 1990). Nevertheless, organizations should adopt IT governance to gain a competitive advantage and sustainability in the prevailing turbulent business environment. Firms that are slow in adopting IT governance, in the long run, may not remain financially viable businesses (Alansari & Al-Sartawi, 2021; Jafarijoo & Joshi, 2021).

2.3   Implementation of IT Governance

Organizations implement IT models, in stages based on their needs and requirements. Researchers believe that the difficulty levels of implementing the IT model are not uniform. It varies from one organization to another—factors such as resources and the willingness of all the stakeholders affect IT governance's efficiency.

Firms with a strong controlling mechanism face less difficulty implementing IT governance; hence they benefit from the optimized output. Also, firms with nonsymmetrical information benefit from IT governance (Almaqtari, Farhan, Yahya, Al-Dalaien, & Shamim, 2022; Paletta & da Silva, 2021).

Firms implementing IT governance must examine the availability of various methods, focus on basic training, and promote a conducive environment (Caluwe & De Haes, 2019). Some methods of implementing IT governance are simple, while others are complicated and complex, but all require resources (Caluwe & De Haes, 2019; Tawafak et al., 2021). Therefore, the implementation process is relatively difficult for small organizations due to limited resources and a lack of support from the senior management. In addition, the designing process is complex, and it takes a while to implement it (Fernandes, Hartono, & Aziza, 2020; Gregory, Kaganer, Henfridsson, & Ruch, 2018). At the same time, firms need skilled labor expertise, motivation, and willingness to implement IT governance (Chakir, Chergui, & Andry, 2021). Firms with an effective mechanism can easily implement IT governance (Harguem, 2021; Henriques, Pereira, Bianchi, Almeida, & da Silva, 2020). Moreover, Huygh and De Haes (2019) found a significant positive relationship between the implementation of IT governance and the organization's performance.

2.4   Factors influencing IT governance

Extant literature suggests that several factors significantly affect IT governance and organizational performance (Fernandes et al., 2020; Gregory et al., 2018). Mostly the past studies have focused on understanding the concept of IT governance from different angles. The literature lacks empirical and rational evidence on the issue. Also, past studies have not systematically examined IT governance and its implementation. Thus, competitive business environment demands more studies on IT governance in its practical applicability (Paletta & da Silva, 2021).

The factors affecting IT governance include set guidelines, rules, practical inferences, and organizational structure culture. To gain a competitive advantage over the competitors, organizations focusing only on management and technology in the IT field have to adapt IT governance (Caluwe & De Haes, 2019).

Effective implementation of IT governance is necessary for an organization's survival and growth. However, it requires comprehensive knowledge of the concept, understanding of issues about information management (Yoshikuni, 2021). Firms can only benefit from IT governance if they have fully implemented all processes. Communication is an essential ingredient for the effectiveness of an organization. Therefore the management must communicate and involve all the stakeholders in the implementation of IT governance (Abdulrasool & Turnbull, 2020; Fattah & Setyadi, 2021).

3.   Methodology
3.1   Literature Collection Methodology

The methodology adopted for the literature collection was "Citation Pearl Growing" (Al-Fatlawi, Al Farttoosi, & Almagtome, 2021; Caluwe & De Haes, 2019). Retrieving articles from the search engines based on keywords may generate articles that may not be relevant to the core topic. Therefore, many researchers believe this "Citation Pearl" method is a better alternative. Based on the core reference, we initially searched for the relevant literature. Then, after completing the first layer of articles up to a certain time, we searched for the second layer of articles that came later.

The current study used the search facility of EBSCO, INFORM, ABI citations and developed the reference list through JSTOR, Premier & Emerald citation indexes. The search methodology was limited to only English, with articles not older than the 2005 calendar year. The study developed 21 references from the research article by Lockett, Moon, and Visser (2006) based on Citation Pearl Method (CPM). The remaining articles were collected on the subject after a thorough study and analysis of literature on IT governance.

3.2   Methodological Review

Oliver and Eales (2008) explained the protocol for analyzing the research methodology besides research type, research approach, research design, data source, nature of data and mechanism of data testing, and analysis techniques. The articles selected for this paper have been collected from various sources of varying nature in this area. The articles and publications are divided into five categories that are discussed in the following sections.

In the first category, the empirical articles are based on the pragmatic approach that has used statistical analysis on the survey instrument. The second category includes the abstracts and ideas from past literature work that are arranged systematically. The third category relates to conceptual articles, which begin with reviewing the past literature and then synchronizing and integrating into new theory through a paradigm shift on any particular area of knowledge or topic. The fourth category includes the methodological articles and publications that explain the new approaches, extending the available methodology with quantitative or analytical discussion of the data. Finally, the fifth category includes the articles based on case studies consisting of knowledge/material and data about any individual or particular organization to sort out and solve some issue or problem.

4.   Results and Analysis
4.1   Nature and types of articles

The study has collected 100 articles based on the methodology discussed in the earlier section. Twenty-nine of these articles have a theoretical nature, and 69 are conceptual or exploratory research articles. The remaining 12 articles have used mixed methodology (qualitative and quantitative). On the sampling side, it was found that the individual respondents

were 24, organizational respondents were 13, and 63 articles were review articles or content analyses of previous research.

4.2   Research design and approach

The in-depth analysis of the prior literature revealed that 69 articles are qualitative and most of the articles published in 2005 are of exploratory level. However, the researchers in 2009 and onward have focused on quantitative research methodology and have aligned the conclusion with the findings. Researchers have attributed such a modification in IT governance research to the maturity of the topic of IT governance.

4.3   Nature of research design

Initially, the qualitative analysis approach was common in the studies on IT governance. For example, the present study included 22 articles presenting IT theories and models by conducting content analysis. In addition, this study used sixty-three articles from extant literature for literature review analysis, and 15 case study-based articles have been used. Moreover, 25 articles in the current study used quantitative analysis through interviews and research questionnaires.

4.4   Source and nature of data

From the perspective of research in social sciences, the primary data has been trendy while researching IT Governance. The in-depth analysis further suggests that the past researchers have accessed the published articles from the websites. Most of the researchers have cited the articles published in the Emerald group.

4.5   Data testing and technique

Since the present study included 69 articles that have used a qualitative approach, statistical techniques are not applicable in such cases. Furthermore, out of 18 articles used in this study, 12 have conducted a linear regression analysis to explain and provide evidence for the relationship between the variables. The remaining 06 articles have used multiple regression and correlation analysis.

4.6   Data analysis techniques

Since the qualitative analysis has used primary IT governance data, this technique is considered more suitable. The analysis of the collected data concluded that the researchers adopted various techniques to analyze the relationship and internal consistency between the variables in descriptive analysis. Sixteen researchers used PLS in the articles the current study reviewed. Fifteen used MANOVA, and 18 used the ANOVA technique to analyze the data. Moreover, it was identified that many researchers have also used panel data analysis. The study found that some researchers have employed content analysis and single and causal mapping techniques to understand IT governance.

5.   Discussion and Conclusion
5.1   Discussion

The current study found that the studies on IT governance have used three thematic approaches. These approaches include (1) implementation of IT governance, (II) adaptation of IT governance, and (III) factors influencing IT governance. Based on prior literature, this study suggests a lack of skills and management support adversely affects IT implementation. The study

also found that organizational structure, size, and culture are significant barriers to adopting IT governance. Thus, both internal and personal factors affect IT governance. Critically reviewing the past studies, this study has attempted to contribute to the body of knowledge by bringing more clarity to the concepts and understanding of IT governance. It is also observed that a shift in paradigm from theoretical work to predictors and antecedents of IT governance during the last decade. The current study has also recommended several dimensions that future researchers can use to improve employees and organizational performance in IT governance research.

Based on the review of 100 articles, the study has discussed critical issues related to IT governance. The scope of IT governance is vast and diversified. In addition, organizations are making investments to introduce different IT models by considering the region and industry. The results of some articles reviewed here suggest IT governance significantly affects organizational performance. However, other studies did not find any association between IT governance and organizational performance. Overall, the in-depth understanding of IT governance from the review of 100 articles is insufficient since it briefly analyzed the three dimensions of IT governance, i.e., implementation, adaptation, and factors influencing it.

5.2   Conclusion

The present study has analyzed 100 articles on the topic or area of IT governance and explored mainly articles that have used the qualitative approach. In contrast, a few have used a quantitative approach. The review of the articles has provided a clear understanding of the concept of IT governance and has defined its importance for organizational efficiency. Moreover, it has contributed by elaborating the concept and definition of IT governance and the challenges, problems, and issues faced during an organization's adaptation and implementation process. The study also attempted to explain the trend of articles published in the last ten years. The study found that 69 of the 100 articles were exploratory research, thus endorsing the argument that IT governance was initially conceptual. Later, the paradigm shifted from a qualitative approach to a quantitative one. The researchers have identified a few primary factors that influence IT governance and examined the impact of IT governance's antecedents and consequences on organizational performance. Hence, the literature on IT governance is mixed and jumbled. This study may motivate other researchers to explore various IT governance areas.

Authors Contribution
Adnan Anwar: conception or design of the work, critical revision of the article
Sahar Qabool: introduction, data analysis and interpretation, drafting the article
Atif Aziz: incorporation of intellectual content, critical revision of the article
Muhammad Kamran Khan: data collection, literature search, drafting the article

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