JPB REVIEW
INTERNATIONAL JOURNAL OF PROFESSIONAL BUSINESS REVIEW
ISSN: 2525-3654
OPEN ACCESS

THE ROLE OF INFORMATION TECHNOLOGY GOVERNANCE ON ENHANCING CYBERSECURITY AND ITS REFLECTION ON INVESTOR CONFIDENCE

Ameer Saheb Shaker[A], Ghazwan Ayad Khalid Al-Shiblawi[B], Ali Hilal Union[C], Karrar Saleem Hameed[D]

ARTICLE INFO

Article history:

Received 20 February 2023

Accepted 26 May 2023

Keywords:

Cyber Security;
IT Governance;
Executive Education;
Investor Confidence.

ABSTRACT

Purpose: The aim of this study is to investigate the relationship between information technology governance and cyber security, and how this relationship affects investor confidence.

Theoretical framework: The study drawing upon theories and concepts from information technology, risk management, and finance to provide a comprehensive understanding of the relationship between IT governance, cyber security, and investor confidence.

Design/methodology/approach: The statistical software Smart-PLS was utilized to perform an analysis and extract relevant findings from the data collected from the sample group, which comprised 153 individuals. The results obtained through this process were integral to the successful implementation of the research in practice.

Findings: The study found that investor confidence is impacted by cyber security, but neither investor confidence nor cyber security are significantly impacted by information technology governance.

Research, Practical & Social implications: The study highlights the crucial role of information technology governance dimensions in financial reports of businesses that operate in the IT industry, particularly telecommunications firms and private banks. By including such information in their financial statements, these organizations can effectively enhance investor confidence in their operations.

Originality/value: The study's originality and value lie in its critique of the inadequate transparency and lack of interest in information technology governance in the financial reports of banks, telecommunications companies, and other sectors listed on the financial market. The findings underscore the significance of including such information in financial statements to boost investor confidence in these organizations.

Doi: https://doi.org/10.26668/businessreview/2023.v8i6.1605

O PAPEL DA GOVERNANÇA DE TECNOLOGIA DA INFORMAÇÃO NO APRIMORAMENTO DA SEGURANÇA CIBERNÉTICA E SEU REFLEXO NA CONFIANÇA DO INVESTIDOR

RESUMO

Objetivo: O objetivo deste estudo é investigar a relação entre governança de tecnologia da informação e segurança cibernética e como essa relação afeta a confiança dos investidores.

[A] *Doctor, Ass.prof. at Department of Accounting, Faculty of Administration and Economics, University of Kufa. Najaf Iraq. E-mail: ameers.naji@uokufa.edu.iq Orcid: https://orcid.org/0000-0002-4612-5752*
[B] *Lecturer at Department of Accounting, Faculty of Administration and Economics, University of Kufa. Najaf, Iraq. E-mail: Ghazwani.alshiblawi@uokufa.edu.iq Orcid: https://orcid.org/0000-0002-8207-5537*
[C] *Lecturer at Department of Accounting, Faculty of Administration and Economics, University of Kufa. Najaf, Iraq. E-mail: alih.alzeadi@uokufa.edu.iq Orcid: https://orcid.org/0000-0003-4749-6720*
[D] *Ass.prof. at Department of Accounting, Faculty of Administration and Economics, University of Kufa. Najaf, Iraq. E-mail: Karrars.hameedi@uokufa.edu.iq Orcid: https://orcid.org/0000-0002-0627-8439*

Estrutura teórica: O estudo se baseia em teorias e conceitos de tecnologia da informação, gerenciamento de riscos e finanças para fornecer uma compreensão abrangente da relação entre governança de TI, segurança cibernética e confiança do investidor.
Desenho/metodologia/abordagem: O software estatístico Smart-PLS foi utilizado para realizar uma análise e extrair achados relevantes dos dados coletados do grupo amostral, que compreendeu 153 indivíduos. Os resultados obtidos por meio desse processo foram essenciais para a implementação bem-sucedida da pesquisa na prática.
Resultados: o estudo constatou que a confiança do investidor é afetada pela segurança cibernética, mas nem a confiança do investidor nem a segurança cibernética são significativamente afetadas pela governança de tecnologia da informação.
Implicações de pesquisa, práticas e sociais: O estudo destaca o papel crucial das dimensões de governança de tecnologia da informação em relatórios financeiros de empresas que operam no setor de TI, particularmente empresas de telecomunicações e bancos privados. Ao incluir essas informações em suas demonstrações financeiras, essas organizações podem efetivamente aumentar a confiança dos investidores em suas operações.
Originalidade/valor: A originalidade e o valor do estudo residem em sua crítica à falta de transparência e desinteresse pela governança de tecnologia da informação nos relatórios financeiros de bancos, empresas de telecomunicações e outros setores listados no mercado financeiro. As descobertas ressaltam a importância de incluir essas informações nas demonstrações financeiras para aumentar a confiança dos investidores nessas organizações.

Palavras-chave: Segurança Cibernética, Governança de TI, Educação Executiva, Confiança do Investidor.

EL PAPEL DE LA GOBERNANZA DE LA TECNOLOGÍA DE LA INFORMACIÓN EN LA MEJORA DE LA CIBERSEGURIDAD Y SU REFLEJO EN LA CONFIANZA DE LOS INVERSORES

RESUMEN
Propósito: El objetivo de este estudio es investigar la relación entre la gobernanza de la tecnología de la información y la seguridad cibernética, y cómo esta relación afecta la confianza de los inversores.
Marco teórico: el estudio se basa en teorías y conceptos de la tecnología de la información, la gestión de riesgos y las finanzas para proporcionar una comprensión integral de la relación entre el gobierno de TI, la seguridad cibernética y la confianza de los inversores.
Diseño/metodología/enfoque: se utilizó el software estadístico Smart-PLS para realizar un análisis y extraer hallazgos relevantes de los datos recopilados del grupo de muestra, que comprendía 153 personas. Los resultados obtenidos a través de este proceso fueron parte integral de la implementación exitosa de la investigación en la práctica.
Hallazgos: El estudio encontró que la confianza de los inversores se ve afectada por la seguridad cibernética, pero ni la confianza de los inversores ni la seguridad cibernética se ven afectadas significativamente por la gobernanza de la tecnología de la información.
Implicaciones de investigación, prácticas y sociales: el estudio destaca el papel crucial de las dimensiones de gobernanza de la tecnología de la información en los informes financieros de las empresas que operan en la industria de TI, en particular las empresas de telecomunicaciones y los bancos privados. Al incluir dicha información en sus estados financieros, estas organizaciones pueden mejorar efectivamente la confianza de los inversionistas en sus operaciones.
Originalidad/valor: La originalidad y el valor del estudio radican en su crítica a la transparencia inadecuada y la falta de interés en la gobernanza de las tecnologías de la información en los informes financieros de bancos, empresas de telecomunicaciones y otros sectores que cotizan en el mercado financiero. Los resultados subrayan la importancia de incluir dicha información en los estados financieros para aumentar la confianza de los inversores en estas organizaciones.

Palabras clave: Ciberseguridad, Gobierno de TI, Educación Ejecutiva, Confianza de los Inversores.

INTRODUCTION

Information technology is required because of the outcomes it generates, which are essential for management to make decisions by defining the right information technology strategies, beginning with planning and organizing, the approach of obtaining them, and then

utilizing and delivering them to the beneficiaries, and sustaining them via ongoing monitoring (Khaddam et al., 2023; Nofal, Al-Adwan, Yaseen, & Alsheikh, 2021; Alzghoul et al., 2023). The governance of information technology is built on four dimensions to carry out its functions, which include planning and organizing by giving information in a timely manner and being reliable with any modifications that occur in the world of information technology. The second component is ownership and implementation, which is accomplished by implementing programs that generate information and providing complete protection for these programs. The third dimension is delivery and support, which is represented by the provision of necessary information to investors and linked parties. The fourth and final dimension is monitoring and assessment via governance, which strives to maintain information security, decrease improper procedures, and conform to regulations controlling information technology governance.

According to research, cybersecurity is a critical practice for protecting and safeguarding computer programs and information from cyber-attacks and virtual piracy (Alhaji & Abu-Nada, 2019). Cybersecurity practices include creating strong passwords, using antivirus software, and implementing measures to prevent unauthorized access to computers. The primary objective of these practices is to prevent unauthorized access to sensitive information, which may be directly related to state security or major commercial companies. Further research indicates that cybersecurity has several dimensions, including economic, political, military, and social dimensions (NIST, 2018). In the economic dimension, cybersecurity is crucial for maintaining and improving economic cooperation while protecting information related to the economy and investment from loss. Politically, cybersecurity is essential for protecting information related to a country's security and stability. In the military dimension, cybersecurity helps to limit program penetration at military installations. Finally, in the social dimension, cybersecurity provides investors with the information they require to make informed decisions. A number of factors, including the effectiveness of the financial market and the fierce competition that exists between them, a company's reputation that creates a favorable impression of its products, and the caliber of financial reports that work to provide timely information relevant to investors, are used to measure investor confidence.

As maintaining and protecting information is a significant and challenging responsibility, cybersecurity risks are currently regarded as one of the important and emerging topics. As such, efforts must be demonstrated through the use of information technology governance, which works to reduce instances of software violations and theft of the information contained therein as well as to provide accurate and unbiased information that affects investor

confidence. The research is significant because it addresses a timely issue, namely cyber security, by describing its risks, the extent of their impact on information technology governance, and the steps taken to mitigate them, improve security, and preserve information, particularly accounting and financial data, which has a direct bearing on investor confidence.

LITERATURE REVIEW

Information Technology Governance

Information technology is now a necessary to keep up to date with the demand of the age and the work environment since it is essential to a company's success in attaining its objectives and optimizing its profitability. The increasing use of information systems by businesses, their reliance on these systems for all aspects of their operations, effective use of information technology, taking use of its benefits, and efforts to safeguard it from threats. business leadership. "*A set of responsibilities and practices carried out by the board of directors and executive management with the aim of strategic leadership of the company to ensure the achievement of information technology goals and to verify that the company's resources are well utilized*" is what is meant by "*information technology governance*" (Al-Jazouli, 29: 2017). According to Muhammad (2012), information is "*a system through which the present and potential applications of information technology are directed and regulated, and plans are assessed and directed to use that technology to serve the firm*" (Abdel-Fattah & Muhammad, 2011). Information technology governance falls under the umbrella of corporate governance, which attempts to create a secure environment that supports business objectives. Al-Awwad thinks that corporate governance, which consists of "leadership, organizational structures, and operations that apply information technology within the boundaries of the company's aims and objectives," includes information technology governance as a crucial component (Al-Awwad, 2021; Nofal et al., 2021).

COBIT Framework and Information Technology Governance

The COBIT framework aims to bring corporate governance and IT governance together. One of the best practices for governance, audits of electronic information systems, linked technologies, and information security protection, it encompasses all company operations and functions. 34 information technology-related goals, broken down into four aspects, have been specified by the COBIT framework. She: (Al-Zubaidi, 2018:2019).

Plan and Organize this dimension includes the possibility of using information technology optimally in companies, as it helps those companies in implementing their public and private objectives, as well as indicating the extent of compatibility between the organizational structure of the organization and the information technology system in preparation for maximizing the benefits of using information technology, and deals with the strategy related to the contribution of information technology in Companies, emphasizing that business objectives must be consistent with what is planned for them, and that information activities must be planned, connected and managed effectively, as the imbalance in the planning and organization process is a major reason for the failure of companies to face challenges from internal and external sources, so proper planning For information technology and good organization, companies achieve good alignment between information technology systems and the company's long-term strategy.

Acquire and Implement this dimension requires identifying information technology requirements, obtaining and implementing them through the ongoing operations within the company, and through plans related to preserving information and the company's assets in extending the life of the company's information technology and its components. Information technology solutions and their implementation and integration in the company's business. In addition, this dimension covers changes in existing systems and their maintenance to ensure the continuity of the life cycle of these systems.

Delivery and Support this means connecting information technology within the company's systems, implementing its application, and supporting operations to be able and effective in implementing information technology systems. This dimension also takes into account the required services and their delivery, which extends from traditional operations to training. Effectively, this dimension also includes the actual processing of data by application systems, which is often categorized under application control.

Monitor and Evaluate this dimension aims to ascertain the extent to which the current information technology systems are compatible with what was designed and planned in order to achieve the objectives of the company. Through internal and external auditors, this means that all information technology operations and resources need to be regularly measured on a permanent basis to strive to apply governance and improve quality, adhere to control requirements, achieve administrative oversight of control operations in the company, and provide them with independent assurances through the internal and external auditor.

It can be said that information technology governance has become one of the necessities of most companies in supporting the growth of their business and is an integral part and extension of corporate governance, as it helps companies to accomplish the assigned tasks and verify the compatibility between the company's general strategy and the formation of an information strategy for the company (Alzghoul et al., 2022). For this reason, investment in the field of information technology and resource management has been adopted optimally, as well as the balance of risks associated with information technology, which is one of the priorities of information technology governance (Alshammare et al., 2022).

Cyber Security

Societies in our present increasingly depend on information technology, and digital technology establishes a way of communication and interdependence that is characterized by the exchange of data, some of which are highly sensitive, and this is the bright side of development, on the other hand, there is another side that is almost dark for that digital development that we are witnessing, that can make Major countries, companies, and commercial and economic institutions are threatened with penetration, and perhaps this is one of the reasons for the importance of studying cybersecurity, which works to protect data, networks, and electronic systems from attacks and breaches that may endanger them and their stability.

Cybersecurity can be defined as "*the security of networks, information systems, data, information, and devices connected to the Internet. It is the area that relates to the necessary measures and protection standards that must be taken to confront threats, prevent them, and limit their effects*" (Jabour, 2018). It is the activity that secures the protection of human and financial resources associated with information and communication technology and ensures the possibility of reducing losses and damages that result in the event of realization of risks and threats (Hassan, 2017). security measures, guidelines, risk management approaches, trainings, best practices, and techniques that can be used to protect the cyber environment and users (Cyber Security Guide for Developing Countries, 2010). Abu Hussein, 2021; Maglaras et al., 2019; Al-Samhan, 2020, indicate that there are dimensions of cybersecurity that can be summarized as follows:

Economic dimension: Cybersecurity is firmly linked to preserving the economic interests of countries, and there is a correlation between the knowledge economy and the expansion of the use of information and communication technology because of the value

represented by the data and information circulated, used and stored, which seeks to enhance the economic development of those countries, which justifies the important role of cybersecurity in providing protection with regard to protecting The service or work provider is companies or individuals, including the protection of intellectual property. The political dimension: The political dimensions of cybersecurity are based on the right of the state to protect its entity, its political system, and even its economic interests, to achieve the well-being of its people, and to inform individuals about the justifications for political decisions taken by their government, or to promote its policies. Technology can be used to spread information and data that may contribute to destabilizing the security of states or governments. The huge amount of information that he can access, or that can be distributed and published on the Internet to reach very quickly to the largest segments of society, regardless of the validity of what is published.

Military dimension: The importance of cyber security is represented in the military dimension of the danger of cyber-attacks and penetrations of military systems and the disclosure of their capabilities, which may cause the outbreak of wars and armed conflicts between states. It is known that the beginnings of the Internet were developed mainly in a military environment, to be added later to the academic environment, with what it represents of research that serves the development of military capabilities and scientific achievements that maintain the superiority of one country over another and are targets that attempts to penetrate do not stop. social and legal dimension: The nature of the open Internet, and through blogs and social networks in particular, allows every individual to express his political aspirations, social and religious aspirations, and the participation of all segments of society with its spectrums and components is a means to enrich and develop this society, which provides an opportunity to view different ideas and information. It is necessary to spread the culture of security in cyberspace and the need for society to cooperate with all its components to achieve and guarantee cybersecurity. In this dimension, cybersecurity is based on protecting the information society and assisting it in applying and implementing laws and legislation. This society and the preservation of rights in it and the protection of the information society and assist it in the application and implementation of these laws and legislation.

Governance of Information Technology and Cyber Security

Information technology governance focuses on the technical side of the company, which is the responsibility of the board of directors and the department responsible for information technology services. Their efforts must be combined to deter external or internal risks by taking

the necessary measures to protect information from sabotage and misuse to achieve an acceptable level of information security to ensure its sustainability.The concept of information security includes three elements of one level of importance (Aql, 12: 2011):

Confidentiality This element includes the necessary measures to prevent unauthorized access to sensitive or confidential information. Safety: (Integrity) It means taking the necessary measures to protect information from intended and unintentional change or modification. AvailabilityThe provision of information when requested and needed is an essential part of its value, and accordingly the value of the information is weakened if the one who has the right to view it is unable to access it when needed, or accessing it requires effort. from accessing information. Therefore, the adoption of the general framework for managing, controlling and monitoring information and communication technology resources and projects simulates the accepted international best practices in this regard, specifically COBIT in all its versions to achieve the objectives and requirements of information technology governance that ensures that it achieves the objectives and strategies of the company and leads to reducing the risks associated with the operation and implementation of information technology and is within the policies And strategies for business requirements, which seek to protect information and cyberspace and the requirements of international standards in this field. Information technology governance is one of the effective measures to confront risks and threats and contribute to reducing cybersecurity risks.

Investor Confidence

Companies are increasingly dependent on information technology in light of the digital economy, as corporate management has become dependent on it in managing and developing information and knowledge and providing it with the required quality, in order to ensure its success and speed of response to environmental changes as a result of global fluctuations and developments surrounding it, and to ensure that information technology works efficiently, corporate management resorts to employing The concept of corporate governance that governs the relations between all parties in the company in the field of information technology governance, in order to be safe and subject to control and oversight in terms of investing in it and employing it properly, and the factors influencing the enhancement of investor confidence are:

The efficiency of the financial market One of the most important factors that attract investment to the financial market is the confidence of investors and their reassurance that their

money is not subject to loss due to deception or fraud. Therefore, they look at the mechanisms in place that should provide them and their money with the necessary protection (Abu Ghamsha, 98: 2013). It should be noted that This confidence is determined by the companies' commitment that the money will be invested properly and that it will not be embezzled or misused by managers, senior investors or members of the board of directors, and that these funds will be invested in an optimal and efficient manner that takes into account their interests in the first place, which is one of the important factors in the emergence of an efficient and developed financial market (OECD, 2004: 40).

Efficient market theory suggests that for a market to be efficient, several conditions must be met. These conditions include information efficiency, where information is abundant and easily accessible at minimal cost to investors, resulting in homogeneous expectations among investors. The market must also have access to advanced technology, such as an advanced communication and electronic network to ensure accurate information availability (Al kasasbeh et al., 2022). A legal framework must be in place to regulate and control transactions while protecting dealers from risks and holding responsible parties accountable. Finally, disclosure and publicity are necessary, and companies must publish their budgets, work results, and data about their projects to reflect their impact on stock price trends, inspire confidence in securities, and enable access to the real price of securities subject to supply and demand laws in the market. Meeting these conditions can contribute to an efficient market where investors can make informed decisions and benefit from equal opportunities (Sultan, 2015).

The reputation of the company Companies seek to build and enhance their reputation in line with the achievement of their objectives, contribute to their development and enhance the confidence of investors to ensure their sustainability in survival and competition (Mert et al., 2021). Some consider the reputation as one of the intangible assets that companies are keen to build and maintain because of its importance in the survival and continuity of the company in crisis conditions, as it contributes to attracting the best job competencies and the sympathy of investors, which contributes to achieving sustainability that makes companies able to provide benefits to stakeholders dealing with them (Soap, 2017). The company's reputation can be defined as one of the company's intangible assets and consists of a set of perceptions formed by the stakeholders towards the organization, and generates reactions to them about its procedures, operations, activities and products, and generates an awareness of the company's image that reflects its various activities and values. The company's reputation can be measured

through Reliance on a scale that includes three dimensions: social responsibility, quality, and creativity.

Social responsibility, quality, and creativity are important concepts that contribute to the success and sustainability of companies. Social responsibility goes beyond the direct obligations towards stakeholders and involves committing to policies and values that benefit society as a whole. It is a moral and ethical commitment made by decision-makers to develop relationships with the community and improve the company's image in front of it (Al Muala et al., 2022). Quality, on the other hand, refers to the ability of companies to provide high-quality products and services that exceed customer expectations. Companies must pay attention to increasing the quality of their goods and services and building operational processes that achieve high-performance work systems. Finally, creativity is an essential element for achieving competitive advantage and economic development. Companies must encourage creativity among their employees and promote innovation in their products and services to remain competitive in the market. By focusing on social responsibility, quality, and creativity, companies can achieve long-term success and contribute to the growth and development of society as a whole.

Quality of financial reports The investment decision is defined as the process of selecting the best alternative from the available investment alternatives, as good decisions usually depend on comprehensive information about investment that investors collect from various sources such as the Internet, television, and other media (Mumtaz et al., 2018). Financial reports are the main source for providing information Which helps investors in making and taking various decisions and to assess the company's ability to use economic resources efficiently and generate cash that enables it to be sustainable for the long term (Ibrahim, 2016). The good relationship between the company and the investors is part of its effective financial policy, so the quality of the financial reports receives the attention of many parties due to its importance in the investment decision-making process. The financial statements, which honestly reflect the financial position of the company and the results of its performance, and are free from misleading and errors, complete and unbiased, and reach investors in a timely manner, which enables them to predict the future and make rational decisions, as well as compare between similar economic units (Al-Sabri, 2019), and indicated (Ramalingegowda et al., 2013) indicated that the quality of financial reports limits the negative impact of dividend distributions on the investment decision, especially in imperfect markets, as

the company may give up investment opportunities in order to distribute profits to shareholders due to the lack of complete information.

Accordingly, it can be said that the concept of corporate governance seeks to achieve transparency and disclosure in all information, especially financial ones, for its active role in achieving the objectives of stakeholders in the company, which indicates interest in achieving the quality and security of that information. It should be noted that information technology governance is not an independent system in itself. Or isolated from the company, but rather it must be viewed as a sub-system, complementary element, or an integral part of corporate governance, since information technology has begun to emerge as a strategic partner for business growth and development, and shifting towards it is a basic necessity to seize the available economic opportunities to increase the efficiency of its operational activities, and there is no doubt In it, the use of information technology is accompanied by several risks, not only represented in cybersecurity risks, but also exceeds the risks of investment and the use of technology to maintain competitive advantages, which constitutes competition that must be accompanied by a similar development in regulatory controls and enhances the quality of accounting information undertaken by information technology governance to contribute to Gain investor confidence in a highly competitive business world. The following hypotheses were developed in order to fulfill the research's goals and provide an answer to the query posed by the research problem:

H1: Information technology governance has a statistically significant impact on improving cybersecurity.

H2: The impact of cyber security on investor confidence is statistically significant.

H3: Information technology governance has a statistically significant impact on investor confidence.

MATERIALS AND METHODOLOGY

In this study, a questionnaire was constructed to assess the research hypotheses using a quantitative research methodology. The questionnaire comprised of three primary axes, and each axis had three dimensions for evaluating investor confidence, with each dimension consisting of a series of linked questions. The questionnaire was designed using a five-point Likert scale, with measurements ranging from one point for material that does not entirely agree to five points for content that totally agrees. The sample size for the study was 153, and the descriptive statistics of the responses were analyzed using various statistical techniques such as

mean, standard deviation, frequency distribution, and correlation analysis. The results of the analysis were used to test the research hypotheses and draw conclusions about the relationship between investor confidence and the dimensions of the questionnaire. This research methodology allowed for a systematic and rigorous investigation of the research problem, enabling the researcher to draw valid and reliable conclusions based on empirical data.

Table (1) Descriptive statistics of the respondents' answers

Cv	Standard Deviation	Average	Totally disagree		Disagree		Neutral		Agree		Totally agree		Q
			%	Score	%	Score	%	Score	%	Score	%	Score	
0.135	0.615	4.569	1%	1	0%	0	3%	4	35%	54	61%	94	A1
0.147	0.660	4.497	1%	1	1%	1	3%	5	39%	60	56%	86	A2
0.175	0.755	4.307	0%	0	2%	3	12%	18	40%	61	46%	71	A3
0.151	0.665	4.418	0%	0	1%	2	6%	9	42%	65	50%	77	A4
0.106	0.474	4.448	Planning and organizing										
0.171	0.732	4.288	1%	1	1%	2	8%	13	48%	73	42%	64	B1
0.150	0.669	4.471	1%	1	1%	1	4%	6	41%	62	54%	83	B2
0.119	0.554	4.654	0%	0	1%	1	2%	3	29%	44	69%	105	B3
0.132	0.603	4.582	1%	1	0%	0	2%	3	35%	54	62%	95	B4
0.171	0.735	4.301	1%	1	1%	1	10%	16	44%	68	44%	67	B5
0.096	0.427	4.459	Own and implement										
0.165	0.703	4.255	1%	1	1%	1	9%	14	52%	79	38%	58	C1
0.169	0.731	4.320	1%	2	0%	0	8%	12	47%	72	44%	67	C2
0.158	0.674	4.255	1%	1	1%	1	7%	11	56%	85	36%	55	C3
0.179	0.759	4.235	1%	1	2%	3	10%	15	48%	74	39%	60	C4
0.173	0.740	4.288	1%	1	2%	3	7%	11	48%	74	42%	64	C5
0.133	0.569	4.271	Delivery and support										
0.161	0.699	4.340	1%	1	1%	2	5%	8	49%	75	44%	67	D1
0.170	0.746	4.399	1%	2	1%	1	6%	9	41%	63	51%	78	D2
0.202	0.832	4.111	1%	2	3%	4	14%	21	48%	74	34%	52	D3
0.145	0.630	4.340	0%	0	1%	1	7%	10	51%	78	42%	64	D4
0.194	0.799	4.111	1%	1	3%	5	13%	20	50%	77	33%	50	D5
0.122	0.519	4.260	Follow-up and evaluation										
0.098	0.427	4.359	IT Governance										
0.194	0.762	3.928	1%	1	3%	4	21%	32	55%	84	21%	32	E1
0.173	0.688	3.987	1%	1	1%	1	18%	28	60%	92	20%	31	E2
0.188	0.747	3.967	1%	2	2%	3	16%	24	61%	93	20%	31	E3
0.175	0.702	4.007	0%	0	2%	3	18%	28	57%	87	23%	35	E4
0.140	0.558	3.972	Economic dimension										
0.225	0.891	3.954	2%	3	3%	5	20%	31	46%	71	28%	43	F1
0.182	0.740	4.065	0%	0	3%	5	14%	22	55%	84	27%	42	F2
0.189	0.752	3.987	1%	1	3%	4	17%	26	57%	87	23%	35	F3
0.218	0.841	3.850	2%	3	3%	5	22%	34	53%	81	20%	30	F4

Cv	Standard Deviation	Average	Totally disagree		Disagree		Neutral		Agree		Totally agree		Q
			%	Score	%	Score	%	Score	%	Score	%	Score	
0.161	0.636	3.964	Political dimension										
0.235	0.935	3.980	2%	3	6%	9	15%	23	46%	71	31%	47	g1
0.265	0.977	3.686	3%	5	7%	11	27%	41	43%	66	20%	30	g2
0.245	0.908	3.712	3%	4	7%	10	24%	37	50%	77	16%	25	g3
0.158	0.651	4.105	0%	0	1%	2	12%	19	61%	93	25%	39	g4
0.194	0.762	3.928	1%	1	4%	6	17%	26	59%	90	20%	30	g5
0.163	0.634	3.882	Military dimension										
0.233	0.877	3.771	1%	2	7%	11	23%	35	50%	77	18%	28	H1
0.245	0.912	3.725	2%	3	8%	12	24%	36	49%	75	18%	27	H2
0.258	0.917	3.549	2%	3	8%	13	37%	57	37%	57	15%	23	H3
0.209	0.801	3.830	1%	1	5%	7	24%	37	52%	80	18%	28	H4
0.188	0.699	3.719	Social dimension										
0.136	0.527	3.884	Cyber security										
0.161	0.684	4.255	0%	0	3%	4	6%	9	55%	84	37%	56	I1
0.172	0.732	4.261	1%	2	0%	0	9%	14	50%	77	39%	60	I2
0.175	0.732	4.190	1%	1	1%	2	11%	17	52%	80	35%	53	I3
0.148	0.645	4.359	0%	0	1%	1	7%	11	48%	73	44%	68	I4
0.195	0.796	4.072	1%	1	3%	5	14%	22	52%	79	30%	46	I5
0.117	0.493	4.227	Market efficiency										
0.160	0.685	4.288	0%	0	1%	1	11%	17	47%	72	41%	63	J1
0.157	0.667	4.235	0%	0	1%	1	11%	17	52%	80	36%	55	J2
0.204	0.829	4.059	1%	1	4%	6	16%	24	48%	74	31%	48	J3
0.168	0.696	4.150	0%	0	3%	4	10%	15	58%	88	30%	46	J4
0.152	0.641	4.222	0%	0	1%	2	8%	12	58%	89	33%	50	J5
0.125	0.525	4.191	Company's reputation										
0.163	0.710	4.346	1%	2	0%	0	6%	9	48%	74	44%	68	K1
0.205	0.826	4.039	1%	1	4%	6	16%	25	49%	75	30%	46	K2
0.164	0.689	4.196	0%	0	3%	4	8%	12	57%	87	33%	50	K3
0.152	0.649	4.268	0%	0	0%	0	11%	17	51%	78	38%	58	K4
0.127	0.536	4.212	Quality of financial reports										
0.101	0.426	4.210	Investor confidence										

Source: Prepared by the authors (2023).

The average responses across all questions, dimensions, and axes were higher than the three-degree default mean of the five-point Likert scale, and the standard deviations and coefficients of variation were low, demonstrating how closely the respondents' responses matched the paragraph-style questions.

RESULTS AND DISCUSSION

Measurement Model Evaluation Criteria

As shown in the table below, according to Hair et al. (2017), the measurement model based on partial least squares structural modeling (PLS-SEM) is assessed using the following criteria:

Table (2) Criteria for evaluating the measurement model

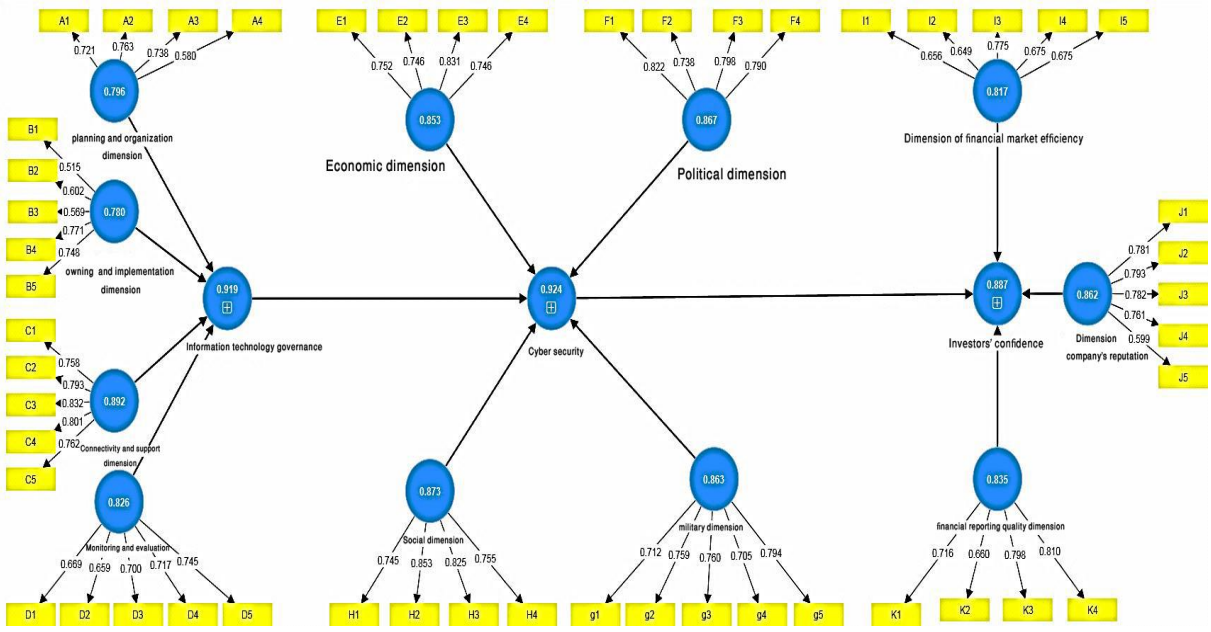
Acceptable results	Standard
Composite reliability greater or equal to %60	Internal consistency
Cronbach alpha greater or equal to 70%	
Standard saturation is greater than or equal to 70%.	Stability
greater or equal to 50%) AVE(	Convergent validity
A variable's correlation with itself is greater than its correlation with the other variables. Fomell-Larcker criterion	Divergent validity
Through Cross Loading, the correlation of variable paragraphs with the variable to which they belong is greater than the correlation of variable paragraphs with the rest of the variables.	

Source: Prepared by the authors (2023).

Evaluation of the Measurement Model Used

The measurement model was developed below using the advanced statistical program Smart-Pls for the purpose of evaluating the measurement model utilized, which comprises the variables, dimensions, and paragraphs of the research, and the following picture depicts that model and the results obtained. obtained:

Figure (2) Form for measuring and testing research variables



Source: Prepared by the authors (2023).

The figure above illustrates the values of two sorts of values:

1 - Stock values represent saturations.

2 -The circle values show the compound stability.

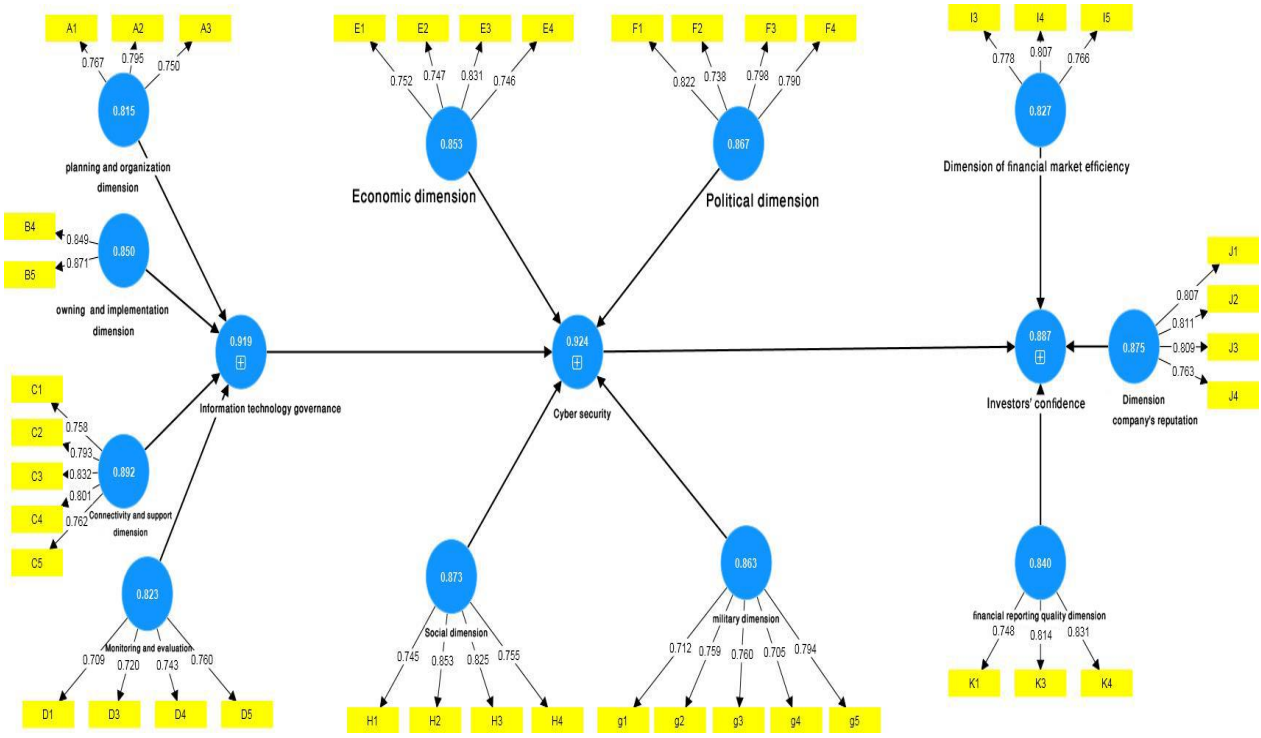
The saturation of several paragraphs was less than the allowed limits, as shown in the above figure, and according to (Hair et al, 2017: 114), the paragraphs are dealt with as follows:

1- Paragraphs with saturation greater than 0.70 are kept.

2- Paragraphs with saturation values less than 0.40 are removed.

3- Paragraphs with saturation values between 0.40-0.70 are deleted if doing so improves the values of the remaining criteria; otherwise, they are deleted if doing so has a detrimental impact on the remaining criteria.

As a result, the researcher removed the paragraphs that did not fulfill the criteria and modified the model as shown in Figure (3):



Source: Prepared by the authors (2023).

The preceding figure shows that eliminating the paragraphs whose saturation was not at the required level resulted in an improvement of the composite stability values shown in the circles. The model evaluation findings can be summarized using the aforementioned model as follows:

• Assessment of the model using the criteria for the indicator's stability, the internal consistency's stability, and approximative validity.

The stability of the indicator, the stability of internal consistency, and approximation validity were used to evaluate the research hypothesis test model. The results are shown in the following table:

Table (3) The results of the evaluation of the measurement model

	Internal consistency		Stability	Questions	Dimensions	Variants
			Standard saturation			
AVE	Composite reliability	Cronbach's alpha				
0.594	0.815	0.659	0.767	A1	Planning and organizing	IT Governance
			0.795	A2		
			0.75	A3		
0.739	0.85	0.747	0.849	B4	Own and implement	
			0.871	B5		
0.623	0.892	0.849	0.758	C1	Delivery and support	
			0.793	C2		
			0.832	C3		
			0.801	C4		
			0.762	C5		
0.538	0.823	0.715	0.709	D1	Follow-up and evaluation	
			0.72	D3		
			0.743	D4		
			0.76	D5		
0.592	0.853	0.77	0.752	E1	Economic dimension	Cyber security
			0.747	E2		
			0.831	E3		
			0.746	E4		
0.62	0.867	0.796	0.822	F1	Political dimension	
			0.738	F2		
			0.798	F3		
			0.79	F4		
0.633	0.873	0.806	0.712	G1	Social dimension	
			0.759	G2		
			0.76	G3		
			0.705	G4		
			0.794	G5		
0.557	0.863	0.801	0.745	H1	Military dimension	
			0.853	H2		
			0.825	H3		
			0.755	H4		
0.614	0.827	0.786	0.778	I1		Investor confidence
			0.807	I2		

	Internal consistency		Stability	Questions	Dimensions	Variants
			Standard saturation			
AVE	Composite reliability	Cronbach's alpha				
			0.766	I3	Financial market efficiency	
0.637	0.875	0.81	0.807	J1	Company's reputation	
			0.811	J2		
			0.809	J3		
			0.763	J4		
0.637	0.84	0.715	0.748	K1	Quality of financial reports	
			0.814	K3		
			0.831	K4		

Source: Prepared by the authors (2023).

The table above shows that the following organizations meet all requirements for evaluating the measurement model: -

1- The model is defined by the stability of consistency reliability as all values of the composite stability and Cronbach's alpha coefficients were greater than 0.60 and 0.70, respectively.

2 -The model is characterized by the stability of the indicators because all the standard saturation values were greater than 0.70.

3 -The model is characterized by asymptotic validity because all the extracted average variance values are greater than 0.50.

•Evaluation of the model according to the criteria of discriminatory validity / correlation of the paragraphs with the variable to which they belong compared with the rest of the variables

The results of this test, which looked at each paragraph's suitability for the variable to which it belonged and whether or not its correlation coefficient with that variable should be higher than its correlation coefficient with the other variables, using the Smart Pls program, were as follows:

Table 5: Cross loading discriminatory validity test

Quality of financial reports	company's reputation	Market efficiency	Social dimension	Military dimension	Political dimension	Economic dimension	Follow-up and evaluation	Delivery and support	Own and implement	Planning and organizing	
0.187	0.197	0.275	0.319	0.295	0.305	0.343	0.272	0.539	0.498	0.767	A1
0.177	0.195	0.239	0.146	0.28	0.269	0.236	0.331	0.52	0.487	0.795	A2
0.184	0.376	0.217	0.446	0.353	0.304	0.329	0.453	0.539	0.408	0.75	A3
0.125	0.235	0.262	0.298	0.311	0.297	0.248	0.33	0.652	0.849	0.567	B4
0.285	0.25	0.256	0.367	0.425	0.347	0.447	0.549	0.672	0.871	0.471	B5
0.236	0.306	0.304	0.382	0.438	0.478	0.441	0.477	0.758	0.719	0.511	C1
0.274	0.332	0.246	0.346	0.42	0.383	0.407	0.52	0.793	0.544	0.648	C2
0.241	0.448	0.407	0.333	0.418	0.492	0.412	0.469	0.832	0.563	0.535	C3
0.252	0.42	0.379	0.401	0.424	0.45	0.429	0.512	0.801	0.614	0.547	C4
0.23	0.316	0.21	0.368	0.434	0.349	0.364	0.49	0.762	0.603	0.483	C5
0.305	0.354	0.287	0.255	0.433	0.342	0.411	0.709	0.368	0.338	0.248	D1
0.095	0.283	0.293	0.213	0.283	0.443	0.345	0.444	0.481	0.381	0.446	D2
0.349	0.53	0.376	0.449	0.528	0.44	0.445	0.72	0.414	0.288	0.321	D3
0.314	0.427	0.45	0.352	0.391	0.306	0.368	0.743	0.455	0.343	0.292	D4
0.263	0.262	0.244	0.453	0.634	0.46	0.564	0.76	0.569	0.515	0.459	D5
0.288	0.369	0.309	0.477	0.488	0.409	0.752	0.481	0.308	0.201	0.2	E1
0.179	0.254	0.203	0.406	0.466	0.465	0.747	0.424	0.459	0.43	0.41	E2
0.323	0.354	0.216	0.564	0.551	0.479	0.831	0.534	0.51	0.427	0.359	E3
0.28	0.429	0.465	0.379	0.504	0.528	0.746	0.453	0.316	0.193	0.239	E4
0.169	0.359	0.357	0.388	0.615	0.822	0.54	0.471	0.483	0.321	0.366	F1
0.093	0.308	0.372	0.179	0.418	0.738	0.389	0.365	0.249	0.176	0.118	F2
0.102	0.324	0.38	0.38	0.556	0.798	0.542	0.398	0.589	0.446	0.43	F3
0.155	0.421	0.451	0.387	0.533	0.79	0.432	0.432	0.354	0.211	0.238	F4
0.258	0.338	0.289	0.311	0.712	0.562	0.437	0.517	0.49	0.339	0.429	g1
0.373	0.29	0.357	0.511	0.759	0.42	0.445	0.542	0.272	0.249	0.164	g2
0.209	0.283	0.272	0.621	0.76	0.514	0.495	0.49	0.432	0.301	0.337	g3
0.352	0.33	0.288	0.34	0.705	0.481	0.544	0.541	0.356	0.224	0.2	g4
0.307	0.211	0.217	0.5	0.794	0.566	0.52	0.481	0.465	0.478	0.37	g5
0.28	0.261	0.127	0.745	0.447	0.196	0.434	0.406	0.198	0.16	0.093	H1
0.217	0.244	0.16	0.853	0.507	0.345	0.494	0.418	0.388	0.352	0.415	H2
0.257	0.426	0.239	0.825	0.503	0.371	0.475	0.443	0.301	0.282	0.286	H3
0.236	0.349	0.202	0.755	0.508	0.445	0.491	0.393	0.56	0.417	0.432	H4
0.249	0.555	0.778	0.234	0.272	0.435	0.399	0.415	0.313	0.191	0.273	I3
0.307	0.406	0.807	0.1	0.273	0.361	0.246	0.307	0.349	0.255	0.286	I4
0.289	0.413	0.766	0.205	0.347	0.358	0.252	0.348	0.26	0.266	0.18	I5
0.252	0.807	0.485	0.27	0.196	0.283	0.334	0.35	0.368	0.22	0.271	J1
0.283	0.811	0.49	0.226	0.237	0.341	0.357	0.437	0.417	0.268	0.281	J2
0.335	0.809	0.44	0.479	0.429	0.403	0.361	0.455	0.367	0.288	0.266	J3
0.448	0.763	0.464	0.314	0.36	0.401	0.405	0.437	0.326	0.128	0.254	J4
0.748	0.325	0.202	0.159	0.259	0.037	0.227	0.267	0.155	0.083	0.112	K1
0.814	0.306	0.267	0.348	0.347	0.096	0.321	0.331	0.236	0.24	0.165	K3
0.831	0.362	0.375	0.232	0.345	0.25	0.289	0.389	0.343	0.245	0.278	K4

Source: Prepared by the authors (2023).

As indicated in the above table, the correlation coefficients of each paragraph of each variable, father of a dimension, with that variable or dimension, which are shaded in dark color (yellow), were stronger than the correlation coefficients with the remaining variables or other dimensions.

RESULTS OF TESTING RESEARCH HYPOTHESES

The following table presents the results of testing the research hypotheses according to the outputs of the Smart-Pls program

Table (6) Results of testing research hypotheses

P values	T statistics (|O/STDEV|)	Standard deviation (STDEV)	Original sample (O)	path coefficient	effect
0.699	0.387	0.011	-0.004	IT Governance -> Cyber Security	
0.001	3.378	0.019	0.065	Cyber Security -> Investor Confidence	
0.642	0.465	0.001	0	IT Governance -> Investor Confidence	

Source: Prepared by the authors (2023).

The preceding table shows that cybersecurity has a significant impact on investor confidence because the P-Value was 0.001, which is 0.05 less than the specified value of the accepted error in social sciences, indicating that the second study hypothesis is accepted. Since information technology governance had no significant effect on cybersecurity or investor confidence because its P-Value was bigger than the specified value of the accepted error in social sciences by 0.05, the first and third study hypotheses were rejected. According to the value of F-square, the following table's structure indicates the magnitude of each variable's effects:

Table (7) How much investor confidence is impacted by information technology governance and cyber security

interpreting the outcome	Integrated reporting qualityF-square	Dimensions
Small effect	0.06	IT Governance
Small effect	0.118	Cyber security

Source: Prepared by the authors (2023).

Cohen's (1988) classification provides the following explanation for the value of F-square:

1- There is a significant influence if it is higher than 0.35.

2- If it falls between 0.15 and 0.35, the effect is moderate.

3- There is a negligible impact if it falls between the range of 0.02-0.15.

4- There is no effect if it is less than 0.02.

We can determine that information technology governance and cybersecurity have a significant impact on investor confidence by comparing the F-square value in Table (7) with

the classification indicated above. The impact of IT governance was 6%, and the impact of cybersecurity was 11.8%.

CONCLUSION

In today's rapidly evolving business environment, cybersecurity and information technology governance have become critical factors for organizations' success. Both professional organizations and researchers are paying increasing attention to these factors, recognizing their importance in ensuring the security and integrity of information systems and protecting organizations from cyber threats. This study has further emphasized the importance of cybersecurity and information technology governance, highlighting four dimensions of cybersecurity that draw investors' attention and can have a significant impact on financial markets. The study found that the moral impact of cybersecurity on investors' confidence can be misleading, and organizations must take steps to address cybersecurity risks and maintain transparency in their financial reporting. One critical finding of this study is the lack of coordination between those responsible for organizing the dimensions of information technology governance and those responsible for managing cybersecurity. This lack of coordination can result in the dimensions of information technology governance having limited influence on cybersecurity, leaving organizations vulnerable to cyber threats. Therefore, it is essential for organizations to establish effective communication channels between these two teams and ensure that they work together closely to develop and implement cybersecurity policies and procedures.

The study has highlighted the need for organizations to prioritize information technology governance and transparency in financial reporting. The lack of interest in information technology governance or inadequate transparency in financial reporting can be criticized for the lack of impact information technology governance has on investors' confidence. Therefore, it is essential for organizations to prioritize information technology governance and ensure that they are transparent in their financial reporting to build and maintain trust with investors and stakeholders. In conclusion, this study emphasizes the critical role of cybersecurity and information technology governance in today's business environment and the need for organizations to prioritize these factors to ensure their long-term success and protect themselves from cyber threats.

The swift advancements in cybersecurity and information technology have a significant impact on financial markets, the companies listed on them, and the investors who deal in those

markets. As a result, it is essential to focus on creating the necessary infrastructure to improve information security and to disclose businesses' interest in and use of cybersecurity requirements. Doing so would increase investors' confidence in the financial markets and the businesses listed on them. Moreover, there is an obligation to reevaluate the components of information technology governance in concert with cybersecurity requirements, ensuring mutual integration between them. This integration is critical for protecting organizations from cyber threats and ensuring the security and integrity of information systems. Additionally, information technology governance-related businesses, such as telecommunications firms and private banks, should be aware of the significance of including information technology governance dimensions in their financial reports. This step would demonstrate their commitment to protecting their information systems and enhancing investors' confidence in these firms. Therefore, as future direction for researchers leadership support can be consider as a moderating variable (Alzghoul, 2017). In summary, this study highlights the importance of cybersecurity and information technology governance in today's business environment. Businesses, financial markets, and investors must recognize the significance of these factors and take steps to prioritize them. By doing so, they can build trust, protect their information systems, and ensure their long-term success in an increasingly digital and interconnected world.

REFERENCES

Abdel-Fattah, A.R., & Mohamed, O.S. (2011). The effect of applying the role of information technology governance on the quality of electronic financial reports in Saudi joint-stock companies - an applied study. *Journal of Financial and Commercial Studies*, Faculty of Commerce, Beni Suef University, (1).

Abu Ghamsha, M. K. (2013). Investment in the Gulf financial markets and their role in attracting foreign investments. *Economic Research Journal*, (6).

Abu Hussein, H. J. (2021). *The Legal Framework for Cybersecurity Services - A Comparative Study* (Unpublished master's thesis). Faculty of Law, Middle East University, Amman, Jordan.

Al-Awwad, A.M.A.W. (2021). *Advanced auditing within the framework of international auditing standards* (1st ed.). Dar al-Kutub and Documents.

Al-Jazouli, & Al-Nil, A. H. H. (2017). *The Role of Information Technology Governance in Increasing the Quality of Financial Reports - A Field Study* (Unpublished master's thesis). Graduate School, Al-Nileen University.

Al-kasasbeh, O., Alzghoul, A., & Alhanatleh, H. (2022). The Impact of Fiscal Policy and Trade Liberalization on Economic Growth: Evidence from Structural Breaks for Jordan. *International Journal of Professional Business Review*, 7(6), e0850-e0850.

Al Muala, I., Al-Ghalabi, R. R., Alsheikh, G. A. A., Hamdan, K. B., & Alnawafleh, E. A. T. (2022). Evaluating the Effect of Organizational Justice on Turnover Intention in the Public Hospitals of Jordan: Mediated-Moderated Model of Employee Silence, Workplace Bullying, and Work Stress. *International Journal of Professional Business Review*, 7(3), 3.

Al-Sabri, M.R.A. (2019). *The role of disclosure requirements for Basel 3 in improving the quality of financial reports and their compatibility with international financial reporting standards* [Unpublished master's thesis, College of Administration and Economics, University of Kufa].

Al-Samhan, M.A. (2020). Requirements for achieving cybersecurity for administrative information systems at King Saud University. *Journal of the College of Education,* Mansoura University, (111).

Alshammare, G. I., Abd Halim, M. S. B., & Alsheikh, G. A. A. (2022). Online Booking Services Assisted by Technology to Improve Customer Loyalty in Jordanian Five-Star Hotels. *International Journal of Professional Business Review: Int. J. Prof. Bus. Rev*., 7(3), 5.

Alzghoul, A. (2017). The role of leadership style on employee outcome: An overview. *American Academic & Scholarly Research Journal*, 9(5).

Alzghoul, A., Khaddam, A. A., Abousweilem, F., Irtaimeh, H. J., & Alshaar, Q. (2022). How business intelligence capability impacts decision-making speed, comprehensiveness, and firm performance. *Information Development*, 02666669221108438.

Alzghoul, A., Algraibeh, K. M., Khawaldeh, K., Khaddam, A. A., & Al-Kasasbeh, O. (2023). Nexus of Strategic Thinking, Knowledge-Oriented Leadership, and Employee Creativity in Higher Education Institutes. *International Journal of Professional Business Review*, *8*(4), e01107-e01107.

Al-Zubaidi, Z. R. M. (2018). *(Assessment of the role of information technology governance and its impact on the quality of auditing electronic accounting systems – a case study in a commercial bank (Awdah Bank - Najaf branch))* (Unpublished master's thesis). College of Administration and Economics Karbala University.

Anand, S. (2006). *Sarbanes-Oxley Guide for Finance and Information Technology Professionals*. Sarbanes Oxley Group.

Aqel, A.M. (2011). *Introduction to Information Technology Governance* (1st ed.). King Fahd National Library.

Geagea, F., & Farhat, S. (2016). Information Technology Governance and its Role in Crisis Prevention. *Journal of Banking Financial Economics and Business Administration*, University of Biskra, (1).

Hamdan, A. (2011). The Relationship between Corporate Governance and Dividend Distribution and its Impact on External Funding Difficulties. *The Jordanian Journal of Business Administration*, 10(1).

Hassan, S. A. L. (2017). Proof of computer crimes committed via the Internet (4th ed.). Dar Al-Nahda Al-Arabia.

Ibrahim, A. T. (2016). *An accounting model for voluntary disclosure of sustainability reports in rationalizing the investment decision - an applied study in a group of Iraqi companies listed in the Iraq Stock Exchange* (Unpublished master's thesis). Faculty of Commerce, Mansoura University.

International Telecommunication Union. (2010). Cybersecurity Guide for Developing Countries.

Jabbour, M. A. (2018). *Cyber is an Obsession of the Age.* Arab Center for Legal and Judicial Research.

Khaddam, A. A., Alzghoul, A., Khawaldeh, K., & Al-Kasasbeh, O. (2023). How Spiritual Leadership Influences Creative Behaviors: the Mediating Role of Workplace Climate. *International Journal of Professional Business Review*, 8(2), e01106-e01106.

Maglaras, L., Ferrag, M.A., Derhab, A., Mukherjee, M., & Janicke, H. (2019). Cyber security: From regulations and policies to practice. In Strategic Innovative Marketing and Tourism (Springer: Berlin/Heidelberg, Germany).

Mert, I. S., Sen, C., & Alzghoul, A. (2022). Organizational justice, life satisfaction, and happiness: the mediating role of workplace social courage. *Kybernetes*, 51(7), 2215-2232.

Mohamed, A.R.A.F. (2012). The Impact of the Application of Information Technology Governance on the Quality of Financial Reports in Saudi Companies - An Applied Study. *The Egyptian Journal of Commercial Studies, Faculty of Commerce*, Mansoura University, 36(4).

Nofal, M. I., Al-Adwan, A. S., Yaseen, H., & Alsheikh, G. A. A. (2021). Factors for Extending E-Government Adoption in Jordan. *Periodicals of Engineering and Natural Sciences, 10*(3).

Muhammad, K.A.Y. (2017). Internal auditing and its role in information technology risk management in banks in Sudan – a field study on a sample of commercial banks in Sudan. *Al-Mohaseb Journal of Accounting and Auditing Sciences*, 24(47).

Mumtaz, A., Saeed, T., & Ramzan, M. (2018). Factors affecting investment decision-making in Pakistan stock exchange. *International Journal of Financial Engineering*, 5(4).

Ramalingegowda, S., Wang, C.S., & Yu, Y. (2013). The Role of Financial Reporting Quality in Mitigating the Constraining Effect of Dividend Policy on Investment Decisions. *The Accounting Review*, 88(3).

Sultan, M. (2015). *The Efficiency of Emerging Financial Markets and Their Role in the National Economy – A Case Study of the Malaysian Stock Exchange*, Muhammad Kheidar University, Maskara.