MODERATING EFFECT OF MARKET TURBULENCE BETWEEN INFORMATION TECHNOLOGY GOVERNANCE AND STAKEHOLDER MANAGEMENT: EVIDENCE FROM IRAQI MULTINATIONAL FIRMS' PERSPECTIVE

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Abstract: Information technology governance (ITG), which influences how firms develop and capture the value and outperform competitors such as stakeholders, is frequently regarded as a fundamental pillar of organizational success. Implementing ITG is one thing, but project managers must also assess the practicability of the undertaking. This article addresses this issue by describing how ITG and stakeholder management are linked in international IT project management. Therefore, this study aims to evaluate the association between ITG and SM, with market volatility (MT) as a moderator inside global IT projects. The self-administered survey questionnaire was used to collect data from managers of multinational IT organizations using a technique of easy sampling. The study utilized a quantitative methodology, a cross-sectional design, and the Partial Least Square-Structural Equation Modeling (PLS-SEM) analysis tool. The findings highlight the relationship between good ITG and stakeholder management strategies for the proactive management of international IT projects. The results suggested that IGT and MT significantly and positively affected SM. The indirect result demonstrated that MT moderates the interaction between IGT and SM considerably and favorably. Based on these findings, it is advised that in the future, project managers and other key project participants will need to employ a relationship management strategy to link ITG and stakeholder participation. In a practical sense, the study examined how ITG was implemented in several global IT projects under stakeholder management.

Keywords: information communication governance, stakeholder management, market turbulence, Iraq

Introduction

The overall execution of international IT projects is susceptible to failure due to governance system challenges, such as the nature of the various stakeholders involved (Alami, 2016). The method by which stakeholders are maintained is crucial to successfully implementing multinational IT projects, even though these projects may have unique governance structures (Shaikh & Randhawa, 2022). In the context of the presented research, a global IT project is carried out in multiple countries and consists of diverse team members with diverse communities, nationalities, expertise, knowledge, and experience working together to achieve a common goal within a multinational group. It would be difficult for international organizations to manage multinational IT projects when they don't always adhere to ITG rules and pay insufficient attention to involving stakeholders (Leonidou et al., 2020). Moreover, multiple companies and ITG processes at the subsidiary level exacerbate the challenges of managing diverse IT projects (Shah & Guild, 2022). In addition, it generates contradictory notions for project professionals regarding how to apply and prioritize governance compliance and the extent to which they manage stakeholders (Zhang et al., 2020).

In addition, according to Mourtzikou, Stamouli, and Pouliakis (2015), ITG appears to be the single most significant aspect of the success of a project because it facilitates decision-making and defines roles and responsibilities for all involved parties (Andry & Setiawan, 2019). When IT investments are aligned with a business's strategy, company value increases (Khther & Othman, 2013). Those active in any capacity with ITG have varied passions for the project. A stakeholder is any party with a vested interest in successfully completing a global IT project. According to the research by Prasad, Green, and Heales (2012), many organizations assume that ITG is the responsibility of IT professionals. The reason for this is that business divisions bear less responsibility for the implementation of ITG. Therefore, the successful completion of the project may be compromised if ITG is executed in isolation from the needs of other stakeholders (Hall, Bachor, & Matos, 2014).

In light of the preceding debate, it should not be surprising that many believe information technology (IT) is an indispensable element of every successful firm that might flourish through stakeholder management (Grover et al., 2018). ITG is essential for optimizing the economic value of IT due to its influence on IT capacity management and providing a safe

foundation for a wide range of creative techniques. Consequently, it fosters organizational agility and aids in preserving a competitive advantage. This discussion has demonstrated that IGT governance is crucial for stakeholder management.

Prior study indicates that market turbulence (MT) is significant in addition to IGT and may help IGT have a bigger effect on stakeholder management. The MT could cause abrupt and unanticipated shifts in client needs and preferences (Jaworski & Kohli, 1993). These changes may be ongoing and dynamic, posing a formidable threat to the organization's competitiveness. The IGT can assist organizations in creating and reorganizing their resource base in response to unpredictably shifting market conditions, assisting them in managing new opportunities or impending threats (Teece, 2016). The ITG emphasizes how organizations can preserve adaptability in an uncertain environment by utilizing internal and external stakeholders. ITG can make decisions based on the resource-based perspective when confronted with volatile market conditions (Teece, Peteraf, & Leih, 2016). This discussion emphasized the significance of MT to the ITG and how it may assist them in managing their stakeholders.

Considering earlier debate, which showed that IGT and MT are significant indicators for stakeholder management, along with their significance, there are still gaps in the prior literature. Prior studies may have focused more on the direct effects of ITG on stakeholder management (Mutakyahwa & Marnewick, 2021; Vorster & Marais, 2014), while the indirect impact has received less emphasis. In addition, the elements that contribute to effective ITG and the role of ITG in promoting organizational performance literature are discussed (Buchwald, Urbach, & Ahlemann, 2014; Ho et al., 2020). However, there is a dearth of research examining the role of ITG in a dynamic and changing environment and its impact on stakeholder management (SM). In addition, MT strongly emphasizes the direct effect on organizational performance (Wang et al., 2015) but pays little attention to the impact on stakeholder management. These gaps demonstrate the necessity for relationships between these concepts in various contexts. Therefore, the current study uses MT as a moderating variable to examine the association between ITG and SM. In addition, the earlier research focuses primarily on developed economies (Chen et al., 2016), while developing economies, particularly Iraqi multinational project-oriented enterprises, receive scant attention. The following research examines the relationship between ITG and SM by examining the moderating role of market turbulence (MT) in international IT projects.

The structure of this article is as follows: Initially, a literature review of ITG and SM concepts is presented. The SM techniques required to regulate worldwide IT projects are also explored, examining the link between SM techniques and various ITG models. The quantitative approach is highlighted in the methods section. Data analysis and results are explained in the third section. Finally, the research's results were presented.

Literature Review

Stakeholder theory and stakeholder management for international IT projects were presented together with the theory of the ITG.

Theoretical Foundation

Two theories comprise the current research: stakeholder theory and resource-based view theory. From the standpoint of stakeholder theory, businesses that maintain favorable relationships with their stakeholders are more likely to achieve long-term success (Freeman & Phillips, 2002). According to Freeman and Phillips's (2002) research, "stakeholders are a group of persons that help a firm achieve its goals and objectives," which serves as the basis for this notion. Whether indirect or direct, stakeholders care about the organization (Maier, 2015), keep it afloat (D'souza & Williams, 2000), contribute to its values (Clarkson, 1995), and participate in its decision-making and operation (McGrath & Whitty, 2017). There is scholarly disagreement over the applicability of stakeholder theory to the management of an organization's relationships with its internal and external stakeholders. The theory also considers the influence of such links on organizational effectiveness. These symbiotic relationships between a business and its components (customers, suppliers, and employees) are underlined (Fassin, De Colle, & Freeman, 2017). In addition, the theory addresses the "principles of who or what is truly relevant" (Parmar et al., 2010). Despite this, critics of Freeman's stakeholder theory have identified several flaws. It is unclear, for instance, which stakeholders merit special regard and which do not (Mitchell & Agle, 1997). In addition, Mitchell and Agle's (1997) stakeholder salience model assists project managers in prioritizing stakeholders according to their authority, legitimacy, and perceived urgency.

Consequently, stakeholder power appears to be the level to which they may influence project results. The legitimacy of a stakeholder refers to how invested or influential a person is concerning an organization. Important and time-sensitive stakeholder requirements must be met immediately; this is what we mean by "urgency." In addition to stakeholder theory, the resource base view theory posits that when an organization has distinctive resources, it can extend its stakeholder base, improving its performance (Barney & Hesterly, 2010; Kuswardinah et al., 2021). Consequently, the resource base views theory is equally significant to this study as the stakeholder theory.

Stakeholder Management

Strategic management (SM) is crucial for the successful completion of IT projects, despite the constant dispute surrounding the numerous stakeholders. SM is the technique required to assess who and how will be affected by a project, to examine stakeholder expectations and how they will affect the project, and to create appropriate management practices for actively including affected parties in the project's decisions and activities. This definition appears within the context of project management (Sirisomboonsuk et al., 2018). Although project SM has received considerable attention in these other fields, including construction, agriculture, and health research, very few studies have been conducted within IT. No way of SM project management is universally approved (Sirisomboonsuk et al., 2018). Nevertheless, several general rules must be followed to ensure that stakeholders are treated properly (Pedrini & Ferri, 2018).

Information Technology Governance

In most instances, a company will design its own, typically adapted to its own company, industry, size, and behavior. ITG arrangements, dependent on policies and procedures approved by senior management and the board, are used to oversee information technology management techniques. To achieve this objective, management will commonly employ instruments and strategies like COBIT and ITIL, among others. These methods include various operations, such as "cost/benefit/risk analysis and IT balanced scorecard analysis." ITG communications platform addresses awareness and interaction of ITG concepts, regulations, and processes, including a common understanding of company and information technology goals, job assignments, and constructive engagement of key stakeholders (Van Oosterhout, Waarts, & van Hillegersberg, 2006). Due to their roots in RBV, these procedures are regarded as organization-specific. Every company must choose information technology (IT) procedures that are consistent with its particular objectives and those of the industry as a whole and then have those procedures frequently examined and checked to ensure that they are up-to-date and appropriate. The ITG evolved from the practice of corporate governance (CG). CG refers to a company's guiding principles, rules, and procedures (Baker & Anderson, 2010). When firms have strong CG, well-coordinated teams can accomplish their strategic objectives efficiently. Multiple systems of governance are compatible within the field of corporate administration.

The concept of ITG evolved from the practice of CG. Guidelines for Companies According to this study's theoretical framework, ITG appears to be a component of CG (Marnewick & Labuschagne, 2011). Multiple ITG definitions are proposed in the literature. According to the research of Weill and Ross (2004), ITG is a process via which suitable IT decisions are made. ITG must be described by Haes and Grembergen (2016) as the "process through which organizations define the norms for the decision-making process."

Consequently, such controls play a significant role in establishing a system of checks and balances, and decision-making aims to build a shared understanding for investing in and carrying out the most critical IT outputs. ITG benefits the firm as a whole and enhances individual decision-making. Calder (2009) defines ITG as "a framework for the leadership, organizational structures and business processes, standards and conformity to these standards, which ensures that the organization's IT supports and enables the achievement of its plans and objectives." Based on these criteria, it is evident that the ITG is primarily concerned with the procedures by which IT is supplied, and organizational value is created. Ghildyal and Chang (2017) and Héroux and Fortin (2018) highlight the core principles of ITG as "I value delivery and business alignment; (ii) responsibility and accountability; (iii) risk management; and (iv) performance management."

In addition, with effective ITG in place, you can feel comfortable that your IT projects are contributing to

the success of your organization. With the assistance of ITG, an organization's IT performance may be measured by monitoring the execution of IT strategies, utilization of IT resources, and delivery of IT services (Boban, 2021). Therefore, when IT Strategy and business strategy are aligned, the positive impact of ITG on the effectiveness of an organization can be realized. Because each subsidiary or national organization may have different strategic objectives, coordinating processes, and operating conditions, adopting ITG inside a global firm may be challenging. Such variances may result in dissimilar ITG methods between the parent company and its subsidiaries. The subsidiary offices of a multinational firm may have adopted but not fully implemented ITG standards. Although much has been published about ITG, very little has been written about its implementation in worldwide organizations (Willson & Pollard, 2009). In addition, a global enterprise's history, management, structure, and governance procedures have an impact on ITG standards. Chou and Liao (2017) discovered that business developing new goods, structural alignment, and adaptive IT co-management influence ITG practices in multinational organizations. According to studies, a number of ITG variables must be considered when implementing an IT project (Haes & Grembergen, 2016). Essential components for the successful completion of IT projects are developed, including the ITG context within the organization, the formation of an IT steering group, and IT stakeholder engagement (Tiwana, Konsynski, & Venkatraman, 2013). Existing ITG solutions illustrate the significance and justification for implementing ITG in IT operations (Alreemy et al., 2016). Academics recommend establishing an IT steering committee to oversee all IT project rollouts (Cobanoglu et al., 2013). During the project's duration, the sponsor is responsible for giving financial support and a comprehensive understanding of what may be anticipated from the effort (van Rooij, 2022). Consequently, the IT project manager appears to be the only significant stakeholder.

Research Framework and Hypothesis Development

The current paradigm for research papers consists of two theories: the resource-based perspective and the stakeholder theory. Researchers suggest that information technology governance (ITG) provides firms with the capabilities necessary to manage their stakeholders effectively. The relationship between ITG and stakeholder management is moderated by market volatility. ITG complements conventional dynamic skills (Khalil & Belitski, 2020). In the same manner, as ITG support improved stakeholder management, according to several researchers (Héroux & Fortin, 2018), ITG may offer corporations the ability to manage their shareholders to grow their market share. Well-governed ITG management boosts stakeholder management's confidence that business and IT goals will be linked strategically (Asensio-López, Cabeza-García, & González-Álvarez, 2019). ITG aligned with strategic objectives may drive the testing and acceptance of innovative processes, which should increase productivity (Anderson, 2017).

Consequently, it may be argued that it has a substantial impact on stakeholder management. ITG processes give management the means to enhance stakeholder management (Tiwana & Konsynski, 2010). ITG systems must ensure efficient coordination between IT and company goals for an organization to have the necessary IT capacity to meet its objectives. Therefore, companies with superior ITG appear to have strong and effective stakeholder management (Peterson, 2004). Companies can achieve this by monitoring external situations and making quick, intelligent decisions, enabling them to manage their internal and external stakeholders (Lu & Ramamurthy, 2011). Ribbers, Peterson, and Parker (2002) discovered that ITG had a favorable and significant impact on stakeholder management. Other research also found that the effective use of ITG could increase an organization's performance by better managing its stakeholders (Zhen et al., 2021).

Further empirical research demonstrated the detrimental and significant impact of ITG on stakeholder management (Peterson, 2000). Mutakyahwa and Marnewick (2021) also discovered a positive and statistically significant relationship between ITG and stakeholder management. On the other hand, it was discovered that market volatility significantly and positively affected stakeholder management (Greenley & Foxall, 1997). Other writers suggested that market volatility is a significant signal for stakeholder management using the same reasoning (Arora et al., 2021; Lievens & Blažević, 2021).

In addition, MT presents challenges and diverse constraints that substantially impact the governance of decision-making processes by necessitating the development of new resources and competencies (Xue, Liang, & Boulton, 2008). The answer may involve boosting IT expenditures and improving stakeholder management (Imboden et al., 2013). According to Jaworski and Kohli (1996), turbulence can cause rapid consumer tastes and preferences adjustments. As a result, it poses a significant threat to the way firms function and the technology they employ. Due to this stress, the company would be compelled to rely on the expert department. During the market upheaval, organizations must modify their business models and even their core operations to maintain a competitive advantage over their rivals (Xue et al., 2008). To boost operational efficiency and maintain stakeholder management, they may be required to expand their IT expenditures.

Additionally, enhanced coordination and pooling of resources, particularly IT, between multiple business divisions can assist the organization in better managing its stakeholders, who may be present during market volatility (Xue et al., 2013). In addition to its direct benefits, the research suggests that IGT may indirectly affect stakeholder management (Elazhary et al., 2022). Consequently, market volatility was utilized as a moderating variable in the current investigation. The research framework and research hypotheses are formulated below based on prior discussion;

The prior studies are the basis for establishing the study framework, which includes three distinct categories of variables. For example, information technology governance (ITG) is an independent variable, market volatility (MT) a moderating variable, and stakeholder management (SM) a dependent variable. These variables are anticipated in Figure.1, shown below.

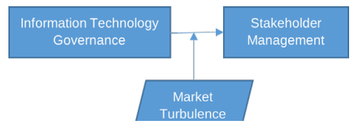

Figure.1: Research Framework

The research hypothesis is formulated below based on previous theoretical and empirical perspective relationships;

H1: Information technology governance positively and significantly influences stakeholder management.
H2: Market turbulence has a positive and significant influence on stakeholder management.
H3: The association between information technology governance and stakeholder management is significantly moderated by market turbulence.

Research Design and Population

The study utilized a quantitative research approach and a cross-sectional research design, both recommended by Creswell and Creswell (2003) when data is collected through a research instrument. In addition, the current research is explanatory, involving testing an existing theory and extending a previous framework based on an earlier empirical relationship (Berman et al., 2000). The relationship between information technology governance and stakeholder management, with market volatility as a moderator, relates to multinational corporations in Iraq. The population is a crucial aspect of data collection since it reflects the primary topics addressed by the entire investigation (Sekaran & Bougie, 2016). The population of the study consisted of managers of global information technology enterprises. Therefore, data were obtained from the managers of a multinational IT organization. The data was obtained from 500 managers using a straightforward sample technique, and 400 questionnaires were returned. The easy sampling method is ideal when the population is unknown and resources are limited (Sekaran & Bougie, 2016).

Instrument development

Researchers adopted measuring scales from previous studies. To ensure there was no overlap across constructs, we conducted an initial literature search. Using a range of indicators, we evaluated the constructs on a seven-point scale (1 = strongly disagree, 7 = strongly agree). Before administering the self-administered questionnaire, the researchers conducted a pilot trial with 45 individuals. The results of the pilot study gave evidence of the instrument's reliability and validity. The idea of information technology governance (ITG), according to Ringle, Sarstedt, and Straub (2012), is a latent second-order reflective construct with three first-order dimensions: decision structure (DS), communication strategy (CS), and formal process (FP) (Wu & Belmonte, 2015). Each DS, FP, and CA was measured with three items. Organizations implement these three methods, and the measuring criteria define the governance systems' well-balanced. In addition, five measures from a previous study were adjusted to account for market volatility (Jaworski & Kohli, 1993). Lastly, ten issues were adjusted based on stakeholder management research (Alladi & Iyyunni, 2015).

Data Analysis

For research framework testing, partial least squares structural equation modeling with Smart PLS for data analysis is applied (Ringle, Da Silva, & Bido,

2015)tl SU. PLS-SEM was utilized in this work for several reasons., PLS-SEM permits modeling latent constructs with reflective construct indicators, as ITG is a reflective instrument (Goo et al., 2009). Second, as with our research, it is the technique of choice when minimum theory is provided, and accurate prediction is required (Teo, Wei, & Benbasat, 2003). Thirdly, the PLS method would avoid imposing restrictive distributional assumptions when evaluating route coefficients other than zero (Gefen & Straub, 2005). With our relatively small sample size, PLS-SEM beats covariance-based structural equation modeling (CB-SEM) in terms of convergence behavior and statistical power (Sarstedt, Hopkins, & Kuppelwieser, 2014; Wong, 2013). We evaluated the structural and measurement models to investigate the model's data (Kong & Nelson, 2020). Some of our conceptions, such as IT competency and ITG, are hierarchical models. These hierarchical models exhibit several interactions among the constructs (Becker & Bailey, 2014).

Assessment of Measurement Model Convergent Validity

The assessment methodology was used to examine the validity and reliability of the construct. There was a search for missing values in all of the constructs. This meant that we had to seek out anomalies and avoid difficulties produced by the usual. The study utilized the average variance extracted (AVE), composite reliability (CR), factor loadings, and cronbach's alpha as criteria for the measurement model. (Hair, Ringle, & Sarstedt, 2013). We calculated AVE, Cronbach's alpha, and CR to ensure the data were accurate and well-fitting. The suggested values for AVE, Cronbach's alpha, and CR are larger than 0.5 and 0.7, respectively. Also, the recommended value for factor loadings exceeds 0.5. (Hair, Ringle, & Sarstedt, 2012; Hair et al., 2013). Table.1's predicted values demonstrate that all constructs satisfy the convergent validity criterion.

Table.1: Reliability and Validity Construct

Constructs	Items	Loadings	Alpha	CR	AVE
Decision Structure	DS1	0.572	0.807	0.863	0.561
	DS2	0.687			
	DS3	0.812			
Communication Strategy	CS1	0.782	0.876	0.892	0.679
	CS2	0.846			
	CS3	0.723			
Formal Procedure	FP1	0.853	0.843	0.881	0.782
	FP2	0.790			
	FP3	0.745			
Market Turbulence	MT1	0.831			
	MT2	0.703	0.813	0.832	0.714
	MT3	0.881			
Stakeholder Management	SM1	0.889	0.912	0.932	0.783
	SM2	0.805			
	SM3	0.709			
	SM4	0.745			
	SM5	0.705			
	SM6	0.901			
	SM7	0.835			
	SM8	0.890			
	SM9	0.782			

Discriminant Validity

The square root of AVEs must be bigger than the correlation coefficients between each pair of matched constructs, which are all greater than 0.5 as indicated in Table.2 for discriminant validity. All loadings demonstrated good convergent validity, meaning that internal consistency was greater than the recommended cut-off of 0.50. (Fornell & Larcker, 1981). In addition, as suggested by Henseler, Ringle, and Sarstedt (2015), the correlation was utilized to determine heterotrait–monotrait (HTMT) ratios. These ratios were lower than the specified cut-off value of 0.90. (Henseler et al., 2015)1. Table.3's projected values demonstrate that construction correlation values are less than 0.90, indicating discriminant validity.

Assessment of Structural Model

The next phase in the investigation is to employ a structural model to determine whether or not the research hypothesis has been confirmed. First, the researcher examined the construct for multi-collinearity, as multi-collinearity modifies the outcomes of the regression model. Multi-collinearity, as assessed by variance inflation factors (VIF), makes it more difficult to predict the dependent variable and determine how various explanatory variables influence i. (Hair Jr et al., 2017). Hair et al. (2017) suggest that multi-collinearity values should be under 5. All values were less than 5, indicating there was no multi-collinearity concern.

Table.2: Hetrorait-Monotrait Correlation

Constructs	IGT	CS	FP	MT	SM
DS					
CS	0.503				
FP	0.432	0.123			
MT	0.672	0.341	0.506		
SM	0.514	0.321	0.390	0.432	

Table.3: Direct and indirect Effect results

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values	Decision
ITG -> CS	0.143	0.151	0.049	2.907	0.004	Accepted
ITG -> DS	0.147	0.146	0.072	2.044	0.041	Accepted
ITG -> FP	0.368	0.371	0.046	7.965	0.000	Accepted
ITG -> SM	0.674	0.686	0.060	11.272	0.000	Accepted
MT -> SM	0.459	0.439	0.077	5.982	0.000	Accepted
MT*ITG -> SM	0.054	0.053	0.026	2.036	0.042	Accepted

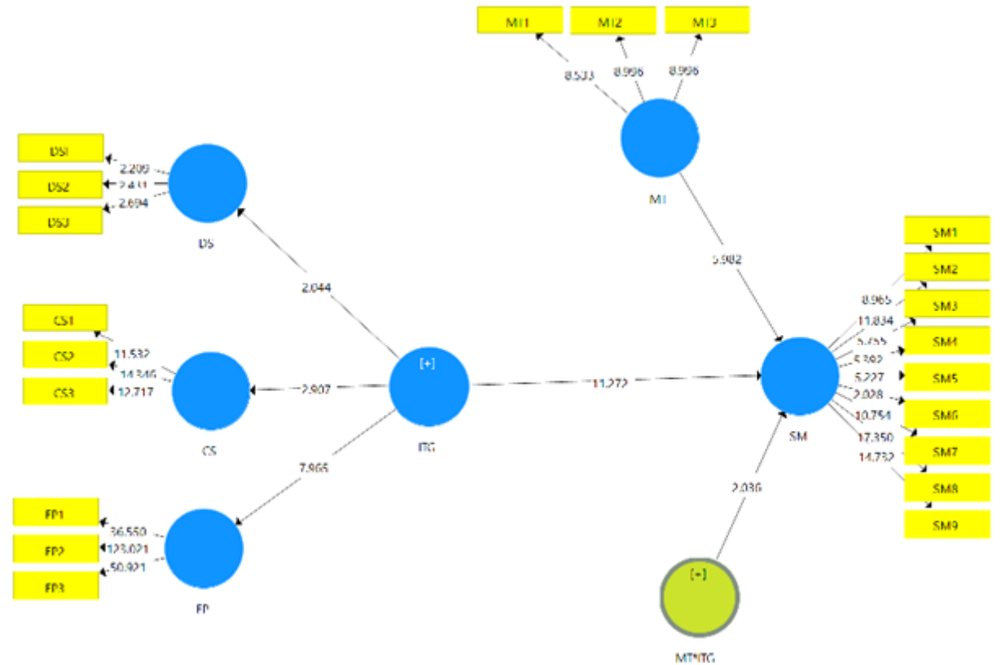

Figure.2: Structural Model

The regression results reveal that information technology (IT) substantially impacts the management of stakeholders (SM). This indicates that Iraqi multinational corporations are placing a larger emphasis on ITG investments to enhance SM. On the other hand, market volatility (MT) had a favorable and substantial

impact on SM. Concerning moderating effects, we discovered that MT moderated the connections between ITG and SM. The impact of ITG on SM is minimal when market volatility is low. When MT is high, ITG exerts a considerable influence on SM. The results reveal that MT moderates the relationship between ITG and SM significantly and positively. The outcome reveals that multinational corporations in Iraq have a higher proportion of MT, which enhances the impact of ITG on SM. All outcomes are presented in the table above.

Discussion of Findings

Information technology (ITG) and stakeholder management (SM) is essential for the on-time completion of worldwide IT projects. Successful implementation of a global IT project necessitates familiarity with the ITG framework, the participation of relevant stakeholders, and the implementation of SM throughout the project. Therefore, organizations with effective stakeholder management are more likely to have effective information technology governance (ITG) (SM). Similar to how CG impacts businesses, ITG also impacts IT (Van Grembergen, De Haes, & Guldentops, 2004). With a greater return on IT investment and improved risk management, ITG provides a framework to assist the board and senior management in ensuring that information technology meets project-related business objectives (Ajamieh et al., 2016). In such a scenario, senior project managers are responsible for making crucial IT decisions for their projects, which lead to investment decisions about IT prioritization. That will impact the organization's ability to attain the required SM level. The company will be able to gain a state of agility and respond to fluctuating market conditions through the dynamic creation and acquisition of essential IT skills and creative practices. The ITG must validate the business value of IT that can function as an enabler for their SM. In light of this, market turbulence (MT) is a vital component that can assist project managers in comprehending why their project needs to increase its SM through ITG. In addition to the significance of these indicators, the linkages between ITG, MT, and SM have been the subject of minimal earlier research. The researcher investigated how ITG might alter SM directly or indirectly to fill this void. As a result, the research team opted to discard the two questions listed below. (I) What effect does ITG have on SM, and (ii) what moderating role does MT play in ITG and SM interactions? These concerns were resolved through the development of a theoretical model and its empirical validation. These two surveys were distributed to the project managers of international corporations working in Iraq.

The research investigation yielded three important results. Initially, the findings revealed that ITG had a positive and substantial effect on SM. These data indicate that the SM rises in tandem with the ITG control. This illustrates that ITG can have a considerable impact on SM. The stakeholder management controls of the ITG processes ensure that this will contribute to the organization's competitive standing (Tiwana & Konsynski, 2010). According to the link between ITG and SM, top project managers would employ a proactive and exploratory strategy to maintain their position as the primary competitor. In contrast, others would adopt a reactive and exploitative system to keep pace with their stakeholder competitors (Ashurst, Cragg, & Herring, 2012).

Consequently, the ITG is an important factor that may aid in directing the SM. The previous study indicates that the SM increases when the ITG is successfully handled (). The findings of this study, which reveal the positive and substantial effects of ITG with SM, support the same conclusions. Next, the influence of MT on SM was analyzed because MT provides challenges and strains business decision-making processes by needing additional abilities and resources (Xue et al., 2008). The results indicate that MT has a positive and noticeable effect on SM. Thirdly, the research shows that MT significantly affects the relationship between ITG and SM. This demonstrates that ITG is essential for managing the moderating effect of market turbulence, which helped us understand the paradox of the relationship. For this reason, it is believed that the relationship between ITG and SM in the presence of MT is substantial.

Theoretical and Practical Implications

Very little study has been conducted on the effects of ITG on SM. Furthermore, few studies investigate how market volatility moderates this link. With new and emerging technologies and the inventive manner in which they are being utilized, the necessity and significance of such an impact are apparent. Consequently, by increasing investments from external investors, ITG's skilled management could help govern their SM, enabling the firm to achieve greater performance in various market conditions. Successful ITG also provides a management framework for SM, ensuring that controls are in place to enable monitoring and guided transitions between capability states. As a result, ITG offers superior management for its external stakeholders, allowing the company to perceive and respond to changing market conditions in a competitive market more effectively. Second, when market shifts pose a danger to business continuity and, in turn, innovation continuity, efficient ITG also provides a reasonable assurance of preservation. This study reveals that ITG indirectly modulates SM through the moderating effect of MT. ITG provides the environment for innovation to develop with sufficient market volatility. Our study's findings demonstrate the theoretical relevance of information technology governance and its positive impact on SM when managed by the firm's MT. Thirdly, the supplied study results indicate that the management of ITG and SM within this project is contingent on the efficacy of the ITG framework, the IT oversight committee, and the IT stakeholders.

Similarly, project leaders and key decision-makers must prioritize identifying these significant stakeholders, evaluating their presence, involving them immediately, and monitoring their engagement. The findings imply that the ITG model must be acknowledged, examined, included, and properly monitored throughout a project's life cycle to achieve good performance. Fourthly, IT auditors must consider the significance of ITG structures that oversee the development of the necessary IT skills in turbulent environments. IT auditors must examine the management controls, including the sensing and responding controls. This will enable protection against unanticipated market changes. In a dynamic environment, the alignment of IT and business objectives must be considered the most critical management control for ITG. In such a dynamic setting, they must decide the organizational context-appropriate design considerations (De Haes et al., 2020).

Research Limitations and future directions

The current study's constraints, which have both theoretical and practical consequences, could aid future researchers in conducting their own investigations. First, the study was limited to multinational IT companies in Iraq, a developing nation with variations from other nations that could aid future research. To make the analysis more generally, future research might be conducted in emerging China, Saudi Arabia, and other countries where multinational corporations operate, as well as in developed nations such as the United States, Italy, etc. Second, the study population comprised international firms that completed a global IT project. Contact may be made with non-governmental organizations and multinational development agencies carrying out analogous activities. The IT advisory board and the IT stakeholder are major ITG constituents. Future research may consider other significant ITG hierarchy members, such as IT supervisors and junior employees. Thirdly, the study focused on a cross-sectional research design in which data were collected once; future research might be conducted using a longitudinal research approach to examine fluctuations in the outcomes.

Conclusion

The focus of the study was the relationship between information technology governance (ITG) and stakeholder management (SM), with market volatility serving as a moderator (MT). We believed the company could manage its stakeholders more effectively and efficiently by utilizing ITG and other tools. In addition, it provides a firm framework for creative endeavors, enabling the business to react more swiftly to changing market conditions. Our proposed research theory is predicated on two well-established theories: the resource-based approach and the stakeholder theory. RBV and stakeholder theory describes how ITG might be a source of SM via MT. We evaluated the proposed conceptual model using a sample of project managers from international firms, and the empirical analysis supports our theory. Our research indicates that MT mitigated the effect of IGT on SM. Our data further highlight the significance of ITG SM when paired with a high MT. But when MT is low, IGT has the biggest effect on SM.

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