**Firm Characteristics and the Level of IFRS Compliance and Disclosure in GCC Countries**


## Abstract

*This study aimed to measure the level of adoption of the disclosure requirements of International Financial Reporting Standards (IFRS) for non-financial listed companies in Gulf Cooperation Council (GCC) markets. The study contributes to the existing literature by providing new, comprehensive evidence regarding IFRS compliance and factors that might influence the level of compliance via its examination for all non-financial firms and for all accounting standards. The study further explored the impact of firm characteristics on IFRS compliance. We employed a self-constructed disclosure index comprising 379 IFRS mandatory disclosure requirements. A cross-sectional analysis was implemented to test the proposed research hypotheses. We found that the level of compliance varies among GCC countries, with companies operating in the UAE having the highest level of compliance. We also found that leverage and the quality of the external auditor had a significant impact on the level of compliance with IFRS by the targeted companies. This indicates that companies with a high leverage ratio are more encouraged to comply with IFRS disclosure requirements in order to provide sufficient information to the users of financial statements to enable them to evaluate their debt repayment ability. Further, our findings demonstrated that companies audited by one of the Big Four audit companies have a high level of IFRS adoption. However, the results were not indicative of any significant relationship between firm size, industry type, profitability and liquidity and the level of compliance with IFRS. In this work, the theoretical and practical implications of our results are discussed.*



**Keywords:** IFRS; Compliance; Firm characteristics; Emerging Markets; GCC


## Introduction

In 1973, the International Accounting Standards Committee (IASC) was formed with the aim of unifying the world capital markets under one common reporting language by developing a single set of International Accounting Standards (IAS) (Ball, 2006; Cagle, 2021). Indeed, developing countries were keener than developed countries to adopt the IAS. This was attributed to several factors: First, the lack of the necessary experience and the absence of the qualified bodies needed to produce suitable accounting standards motivated these developing countries to adopt IAS in order to incorporate modern practices and sophisticated financial innovations. Second, these countries aimed to benefit from the experience of the international bodies and to align themselves with the harmonisation of global standards, as doing so would encourage and attract foreign investments (Samaha & Stapleton, 2009; Samaha et al., 2016).

However, after the emergence of the International Accounting Standards Board (IASB) in 2002 (accounting standards being referred to as the International Financial Reporting Standards (IFRS)) (Ezejiofor, 2022), and the decision by the European Union (EU) to comply with IFRS in 2005, the number of both developed and developing countries that have adopted IFRS has remarkably increased (Edeigba et al., 2018). Recently, over 166 jurisdictions have implemented IAS/IFRS (Cagle, 2021). Therefore, the spread of these international standards has encouraged scholars to measure the level of adoption of IAS/IFRS in different regions. These scholars have investigated whether certain standards are applied in a certain country (e.g. Kraal et al., 2015; Van Zijl & Maroun, 2017) or have evaluated the level of compliance with all standards (e.g. Hla et al., 2013; Appiah et al., 2016; Uyar et al., 2016). In addition, most of these researchers, in addition to examining the level of compliance with IFRS, have attempted to explore the factors that might affect such compliance. Given this increasing attention to IFRS issues, the present study posed two research questions: What is the extent of IFRS compliance in non-financial listed companies within the Gulf Cooperation Council (GCC) region, and what are the main factors that impact such compliance?

Factors that might influence the level of compliance with IFRS have been primarily investigated in the literature within three groups: First, corporate governance factors, such as the number of members on the board of directors, the audit committee and the existence of non-executive members on the board (Alzeban, 2018; Nalukenge et al., 2018). Yamani et al. (2021) recommended that in order to promote IFRS compliance level, policy setters and regulatory agencies need to enhance corporate governance codes. Second, institutional and cultural factors, such as culture, norms, ethics and the regulatory environment (De George et al., 2013; Nalukenge et al., 2018). The third group of variables includes firm characteristics, including some financial ratios (e.g. leverage, profitability and liquidity), firm size, industry of the firm and some forms of ownership (e.g. private or public and listed or non-listed) (Lopes et al., 2016; Murcia, 2016; Uyar et al., 2016).

Based on a review of the existing literature, it was concluded that although GCC countries adopted IAS/IFRS early, they have not received the attention they deserve from researchers. In other words, most prior work has been conducted in a single country (e.g. Abdelrahim et al., 1997; Al Mutawaa & Hewaidy, 2010; Alsaqqa & Sawan, 2013) or has examined the level of compliance with one standard or selected standards (e.g. Joshi & Al-Mudhahki, 2013; Abdelrahim et al., 1997). Al-Shammari et al. (2008) performed the first study that examined compliance with IAS for all GCC countries; however, this study was conducted prior to the reformation of the IASB and the issuance of IFRS in 2001, after which significant, drastic changes to IAS/IFRS requirements have occurred. Moreover, Al-Shammari and colleagues measured the level of IFRS compliance among 137 companies out of more than 500 listed companies at that time. Hence, there is a lack of comprehensive and material evidence regarding IAS/IFRS compliance and the factors that can enhance or hinder full compliance with IFRS requirements within the GCC region.

Therefore, the current study provides a significant contribution to the existing literature by introducing new evidence and fresh insights into IFRS research areas. It first examined the level of compliance among all non-financial listed companies in seven financial markets across the GCC (Saudi Arabia, United Arab Emirates (UAE), Qatar, Kuwait, Bahrain and Oman)[1]; this could be the first comprehensive study to have examined the level of compliance with IFRS disclosure requirements among all GCC listed companies. GCC countries represent an ideal case study to examine such an issue as some of these countries were early adopters of IAS/IFRS, particularly Oman and Kuwait, which adopted IAS in 1986 and 1991, respectively (Al-Mannai & Hindi, 2015). Further, besides possessing the required financial experience and capability to adopt IFRS, these countries have open economies and huge foreign direct investments, which motivate them to properly apply these standards (Uyar et al., 2020). Second, while most previous studies concentrated on single or multiple IAS/IFRS (Kraal et al., 2015; Van Zijl & Maroun, 2017), our

[1] The following financial markets were included in the current study: Kuwait Stock Exchange (KSE), Qatar Stock Exchange, Muscat Securities Market (MSM), Saudi Stock Exchange (Tadawul), Abu Dhabi Securities Market (ADSM), Dubai Financial Market (DFM) and Bahrain Stock Exchange (BSE).

self-constructed disclosure index encompasses all applicable standards, some of which have not yet been examined within the GCC context, such as IAS 19 and IAS 26. Finally, this study also examined the extent of IFRS compliance with respect to the effect of a number of firm characteristics: firm size, profitability, leverage, liquidity, industry type and external auditor quality – these characteristics are important, as they play a major role in determining the extent of companies' disclosure (Omar & Simon, 2011; Alhazaimeh et al., 2014).

The rest of this paper is organised as follows: The next section reviews the literature related to the level of compliance with IAS/IFRS and discusses the development of the relevant hypotheses. The third section presents the methods adopted in the research as well as the self-constructed disclosure index. The fourth section demonstrates the data analysis. The fifth section presents the discussion of our findings, and the last section provides conclusions and highlights the theoretical and practical implications of the current results.

## Literature Review and Hypothesis Development

### *Existing Evidence on the Level of Compliance with IAS/IFRS*

In the last couple of decades, scholars have paid attention to the adoption of IFRS due to their dynamic nature, continuous development and widespread global distribution (Abdelqader at al., 2022). Therefore, several studies have examined the level of companies' compliance with IAS/IFRS in many developed and developing countries with the aim of exploring the determinants of such compliance. In developed countries, Guerreiro et al. (2008) investigated the level of preparation by Portuguese companies for adopting IFRS and found that firm characteristics play a significant role in determining the level of IFRS compliance. Hellmann et al. (2010) examined IFRS adoption in Germany through interviews with a sample of stakeholders; they reported that the level of the country's adoption of IFRS is affected by its contextual factors. In another work, De George et al. (2013) examined the audit fees incurred by all Australian listed firms at and after the adoption of IFRS; their results suggested that audit cost increased by 23% in the year of IFRS transition and by 8% in subsequent periods beyond the normal yearly fees. Tsalavoutas and Dionysiou (2014) stated that the market value of the firm plays a significant role in determining its level of compliance with IFRS. Based on a sample of German and Italian firms, Cascino and Gassen (2015) explored whether mandatory IFRS adoption enhances the comparability of financial accounting information and suggested that the effect of mandatory IFRS adoption is managerial. In Japan, Shimamoto and Takeda (2020) compared the degree of conservatism between IFRS adopters and local standards adopters; they revealed that the change in conservatism was positively associated with IFRS adoption.

Developing countries have been given greater attention by researchers, which could be attributed to the factors, stated earlier, that motivated the early adoption of IFRS by many of these countries or to institutional differences between developed and developing countries that make the adoption process more complicated in the latter. In this respect, Morris and Gray (2007) explored the level of compliance with IFRS among 519 firms in 12 Asian countries in 2002; they found that country-level variables and firm-level variables affect the level of adoption of IFRS. Using a sample of Hungarian firms, Fekete et al. (2008) reported that the average level of compliance is 62% and found that the size of the firm and its industry type hinder IFRS implementation, as big companies and high-tech companies had a higher level of compliance with IFRS. Alanezi and Albuloushi (2011) reported a variation in the level of compliance among companies operating within different industries. They also reported that the existence of an audit committee and leverage positively affect the level of compliance with IFRS. Appiah et al. (2016) examined the impact of five firm-specific characteristics on the level of compliance in Ghana. The results of their content analysis of financial statements suggested that firm size and auditor type are positively correlated with the level of compliance, while firm age and leverage are negatively associated with the level of compliance – profitability was found to have no effect. Uyar et al. (2016), who examined the level of compliance with IAS/IFRS among Turkish firms through a questionnaire survey, reported that Turkish firms do not equally comply with IFRS requirements and that listing status, foreign ownership, training staff and firm size are positively correlated with the level of compliance. Further, using the meta-analysis techniques of 17 previous empirical studies, Samaha et al. (2016) reported that firm size, profitability, leverage and multi-nationality are strongly associated with IFRS compliance in emerging markets. Edeigba et al. (2018) suggested that organisational culture plays a significant role in determining the level of IFRS compliance. Appendix A provides a list of some previous studies that examined the level of compliance with IFRS and the reported level of compliance.

### *Hypothesis Development*

#### *IFRS Compliance Level in GCC Countries*

In 1981, the GCC was established with the purpose of integrating the economic and financial affairs, foreign policy and national security of six Arab Gulf countries: Saudi Arabia, Kuwait, the UAE, Qatar, Oman and Bahrain (Al-Shammari et al., 2008; Haak-Saheem et al., 2017). These countries have been typically examined together in the literature due to their common geographical area, religion, ethnicity and language, political regime, source of income, histories, cultures and traditions (Shehata, 2016).

Securities market laws in each GCC country require that each listed company in any of the seven GCC capital markets submit audited financial statements to the stock exchange at the end of each financial period (Al-Shammari at al., 2008). These financial statements are governed by IAS, which were adopted in Oman, Kuwait and Bahrain in 1986, 1991 and 1996, respectively. In the other GCC countries, IAS were required for banks, investment firms and financial companies since the beginning of the 1990s – particularly, IFRS were adopted by Saudi Arabia, Qatar and the UAE in 1992, 1999 and 1999, respectively (Al-Mannai & Hindi, 2015). The adoption of the IFRS in all GCC countries has come as a response to the high growth rate in all GCC capital markets, which has increased the need for external financing and for attracting more foreign investments, especially after the spread of multinational firms in most of these countries (Al-Shammari et al., 2008). Besides, IFRS would help emerging markets improve their level of disclosure, decrease agency costs due to information asymmetry and concentrated ownership, and meet the needs of local and international investors through enhanced transparency and comparability of financial statements (Uyar et al., 2016; Nguyen, 2021).

Several factors that have an impact on the level of compliance with IFRS, such as culture, education, accounting profession competency and internationality, have been reported by prior work (e.g. Zeghal & Mhedhbi, 2006; Daske et al., 2008). In addition, Haniffa and Cooke (2002) reported five groups of variables that affect the level of compliance with IFRS: economy, capital markets, accounting and regulatory framework, enforcement mechanisms and culture. Zeghal and Mhedbi (2006) stated that the institutional and environmental factors of each country also have an impact on the level of compliance with IFRS.

Based on the arguments of institutional theory, the level of IFRS adoption is determined based on a country's culture and environment, which is justified because they are responsible for forming the country's enforcement procedures, which are used to monitor companies' disclosure practices (Edeigba et al., 2020), and for shaping the awareness and understanding of financial statement preparers and users about the importance of financial disclosure (Saudagaran & Meek, 1997; Juhmani, 2017). The absence of appropriate enforcement mechanisms may result in a higher level of non-compliance with IFRS (Nobes, 2006; Rahman, 1999) as the cost of not complying with IFRS (penalties) will be lower than that of compliance (Al-Htaybat, 2005; Dahawy & Conover, 2007; Demir & Bahadir, 2014).

Differences in the level of compliance among companies in GCC countries are attributable to corresponding country-specific differences (e.g. Tower et al., 1999; Street & Bryant, 2000). More precisely, the capabilities needed to compel companies to adopt the disclosure requirements of IFRS differ among countries – consequently, the level of IFRS compliance will vary accordingly. In this regard, Al-Shammari et al. (2008) stated that GCC countries have different levels of enforcement and distinct monitoring mechanisms and adopted IFRS in different years. Hence, each GCC country will have different levels of IFRS compliance. Therefore, grounded in the arguments of institutional theory and given the fact that GCC countries have different levels of enforcement and experience concerning IFRS compliance, we expected that the level of compliance with IFRS in these countries would not be the same. Hence, our first hypothesis was as follows:

*H1: There are significant statistical differences in the level of compliance with IFRS among GCC counties.*

***Firm Size***

Legitimacy theory states that larger companies are more likely to have a higher level of IFRS compliance in order to earn legitimacy and social acceptance as they are more closely scrutinised by investors and are subject to greater regulations (Watts & Zimmerman, 1986). Besides, larger firms must raise more capital from local and global financial capital markets; in this respect, Inchausti (1997) stated that having a high level of IFRS compliance would decrease information asymmetry between insiders and outsiders and increase the availability of capital. Alsheikh et al. (2021) demonstrated that large firms have a higher tendency to adopt IFRS and disclose more information to decrease the level of information asymmetry. Further, signalling theory asserts that, to be well known by investors, larger firms are expected to have a higher level of IFRS compliance, which would facilitate the collection of capital when issuing new shares (Baazaoui & Zaraï, 2019). Finally, larger firms, typically, have more resources, expertise and advanced software that enable them to demonstrate a higher level of IFRS compliance (Omar & Simon, 2011; Nguyen, 2021). Putsai & Mkhize, (2021) stated that companies' expansion is positively related to their tendency to enhance the level of IFRS adoption.

Empirically, a positive relationship was reported between the level of compliance with IFRS and firm size (e.g. Devalle et al., 2016; Santos et al., 2014; Appiah et al., 2016; Uyar et al., 2016; Alsheikh et al., 2021). Within the GCC context and Middle East countries more broadly, most previous studies have reported similar results, thereby supporting relevant theoretical arguments (e.g. Al-Shammari et al., 2008; Al Mutawaa & Hewaidy, 2010; Omar & Simon, 2011; Alsaqqa & Sawan, 2013; Joshi & Al-Mudhahki, 2013; Samaha et al., 2016). Nevertheless, a few studies reported a non-significant relationship between firm size and IFRS compliance (e.g. Al-Moataz & Hussainey, 2012). Based on the previous discussion as well as on the arguments put forward by legitimacy and signalling theories, we expected that large GCC listed firms would more likely be motivated to comply with IFRS than small firms in order to derive the potential benefits of disclosure. Therefore, we formulated the second hypothesis as follows:

*H2: The level of IFRS compliance in GCC countries is positively affected by firm size.*

***Profitability***

Agency theory states that profitability plays a significant role in determining the level of financial disclosure as it is considered a significant indication of managers' performance, which in turn affects their continuation and compensation arrangements (Omar & Simon, 2011). Managers in highly profitable companies lean towards increasing the level of disclosure through the adoption of IFRS to justify their compensation, improve shareholders' confidence and safeguard their managerial positions (Singhvi & Desai, 1971; Inchausti, 1997; Pichler et al., 2018). In addition, signalling theory suggests that highly profitable companies are more motivated to disclose more information through the implementation of IFRS to signal their good performance and avoid the undervaluation of their shares (Wallace & Naser, 1995; Abd-Elsalam, 1999; Omar & Simon, 2011).

Empirically, some studies have reported a significant positive relationship between IFRS compliance and profitability (e.g. Inchausti, 1997; Apostolou & Nanopoulos, 2009; Pichler et al., 2018). Conversely, other studies have reported a negative relationship (e.g. Wallace & Naser, 1995). However, the majority of previous studies did not report any potential impact of profitability on the level of IFRS compliance (e.g. Street & Bryant, 2000; Appiah et al., 2016; Uyar et al., 2016). Within the Middle Eastern context, most researchers have reported a positive association between the level of IFRS compliance and profitability (Al-Akra et al., 2010; Al-Moataz & Hussainey, 2012; Al-Janadi et al., 2013; Alturki, 2014). Also, Samaha et al. (2016) reported that the level of compliance with IFRS in developing countries is strongly and positively associated with profitability as profitable firms can easily afford the cost of adopting IFRS. However, other studies did not find any relationship between IFRS compliance and profitability (see Al Mutawaa & Hewaidy, 2010; Haddad et al., 2015). Based on the theoretical argument and empirical evidence presented above, we developed our third hypothesis:

*H3: The level of IFRS compliance in GCC countries is positively affected by profitability.*

***Leverage***

Based on agency and signalling theories, companies with high leverage would provide a higher level of compliance with IFRS for the following reasons: first, to prove to shareholders that they can repay debts (Ahmed & Courtis, 1999; Ezat & El-Masry, 2008) since when a company increases its debt load, owners and creditors need more information to assess the company's capacity to meet its obligations (Bradbury, 1992; Wallace et al., 1994); Companies with higher level of leverage lie under a high level of monitoring and influence regarding their financial information disclosure by banks and financial institutions (Putsai & Mkhize, 2021). Second, having high leverage increases agency costs, and thus companies with large debts tend to comply more with IFRS disclosure requirements to mitigate these costs (Lopes & Rodrigues, 2007; Hassan, 2009).

Empirically, evidence from previous studies has been mixed – for example, Haji and Ghazali (2013), Appiah et al. (2016), and Samaha and Khlif (2016) reported a positive association between leverage and the level of adoption of IFRS disclosure requirements. However, other studies have reported a negative relationship (see Hodgdon & Hughes, 2016), whereas a third group of studies found no association (Ho & Wong, 2001; Uyar et al., 2016). Studies that have been conducted within the context of GCC and Middle Eastern countries more broadly have reported a positive association between leverage and the level of compliance (Al-Shammari et al., 2008; Al-Akra et al., 2010). However, very few studies found no effect of leverage (Haddad et al., 2015). Based on the surrounding theoretical debate, we proposed our fourth hypothesis:

*H4: The level of IFRS compliance in GCC countries is positively affected by the level of leverage.*

***Liquidity***

Based on agency theory, companies with a low level of liquidity disclose more information to minimise the conflict between owners and managers (Abd-Elsalam, 1999) and to meet the need of shareholders and lenders for affirmation of their ability to pay short-term debts (Wallace & Naser, 1995). Nevertheless, signalling theory argues that companies with high liquidity disclose more information in order to distinguish themselves from other companies with lower liquidity (Abd-Elsalam, 1999; Barako et al., 2006), as liquidity could be used as an indication of the going concern assumption for companies (Omar, 2007).

The empirical results on the relationship between liquidity and the level of disclosure are inconclusive. Camfferman and Cooke (2002) found a significant positive relationship between the two variables for a sample of UK and Dutch companies. Nevertheless, Wallace et al. (1994) and Gul and Leung (2004) indicated a negative relationship in Spain and Hong Kong, respectively. Other studies did not report any relationship (e.g. Barako et al., 2006). In the Middle East, Hassaan (2012) reported a significant relationship between liquidity and IFRS compliance in the Jordanian and Egyptian contexts. However, Haddad et al. (2015) reported no relationship between liquidity and IFRS compliance in Jordan. Based on the above discussion, the fifth hypothesis was formulated as follows:

*H5: The level of IFRS compliance in GCC countries is positively affected by liquidity.*

***Industry Type***

Competition was demonstrated to have an important role in shaping the level of disclosure, as companies may be reluctant to reveal information about their activities to competitors (Suwaidan, 1997; Depoers, 2000). Besides, other companies may imitate the disclosure practices of dominant companies in a specific industry since the former may consider these disclosure practices to be the most appropriate for implementation (Omar & Simon, 2011). Another reason for the variations in disclosure practices among industries could be attributed to the accounting policies and systems that govern these industries, which may determine the trend of companies' disclosure practices; for example, the banking sector is under greater regulatory pressure than other sectors, and hence companies operating in this industry disclose more information (Craig & Diga, 1998). Finally, the extent of social responsibility of an industry also determines the level of disclosure implemented in that industry; the latter implies that some sectors are a matter of higher social responsibility than others. For instance, manufacturing companies are more concerned with pollution than other types of companies; therefore, they are expected to have a higher level of disclosure.

Concerning the empirical results, most previous studies have reported significant differences among industries with respect to their level of compliance with IFRS disclosure requirements

(Cooke, 1991, 1992; Street & Gray, 2002). However, other studies have reported no differences (Glaum & Street, 2003; Anderson & Daoud, 2005). Within the Middle Eastern countries, Al-Shammari et al. (2008) and Haddad et al. (2015) reported significant differences in the level of disclosure between different types of industries. Al Mutawaa and Hewaidy (2010) also concluded that Kuwaiti companies listed in the investment sector have a higher level of disclosure than companies in other industry sectors. Likewise, Omar and Simon (2011) found that industrial companies disclose more information than services companies as the nature and complexity of their activities are different; they further argued that some standards are applicable only for manufacturing companies and, as a consequence, they will have a higher level of IFRS compliance. Based on these theoretical arguments and in alignment with the results reported by most previous studies within the GCC and Middle East contexts, our sixth hypothesis was developed as follows:

*H6: The level of IFRS compliance in GCC countries differs among different industries.*

***External Auditor***

According to agency theory, the independence of the external auditor mitigates managers' opportunities to manipulate earnings and helps in monitoring their actions, which guarantees the integrity of financial reporting (Chung et al., 2003; Hasan et al., 2013). The quality of the external auditor was reported to play an essential role in the level of disclosure of a company and in the strength of shareholders' assurance concerning the implementation of accounting regulations and rules in preparing financial statements (Brennan, 2007). Further, agency theory considers the external auditor as a tool to decrease agency costs by enhancing the level of information provided to the public, which helps to decrease the level of information asymmetry (Anderson & Daoud, 2005; Barako et al., 2006).

Scholars have recorded a high level of disclosure and IFRS compliance among companies that employ an external auditor from one of the Big Four audit companies around the world (Becker et al., 1998; Tsalavoutas, 2011; Pichler et al., 2018; Riccardi, 2019). However, Firth (1979), Depoers (2000), Anderson and Daoud (2005), and Barako et al. (2006) found no significant relation between the quality of an external auditor and the level of disclosure. Regarding studies conducted in the Middle East, Al-Akra et al. (2010), Omar and Simon (2011), and Demir and Bahadir (2014) revealed that the type of external auditor plays a significant role in determining the extent of compliance with mandatory disclosure requirements of accounting standards. However, Al-Shammari et al. (2008) found no significant relation between external auditor quality and compliance with IFRS in the GCC context.

Based on the discussion outlined above, having a third-party opinion about the preparation of financial statements can enhance the level of compliance with IFRS. Therefore, our seventh hypothesis was formulated:

*H7: The level of IFRS compliance in GCC countries is positively affected by the quality of the external auditor.*

## Research Methodology

### *Data and Sample*

The data required to measure the research variables and test the proposed hypotheses were obtained from the annual reports of non-financial listed companies in seven financial markets in the six GCC member states. Financial companies were excluded as their disclosure practices are different given that they are directed by the regulations of the central bank (Abed et al., 2012). The study population consisted of 450 non-financial listed companies as of the end of December 2016. Instead of selecting a specific sample, we decided to explore the whole population. However, some companies were excluded as they had a financial year end other than December 31, 2016, whereas others were excluded as they were not listed on the stock market since the beginning of 2016. Finally, some companies were not included in the analysis due to the unavailability of the required data for these companies for 2016. Accordingly, this resulted in a sample of 390 companies in GCC countries for which variations in their level of compliance with IFRS were examined and – due the unavailability of data about firm characteristics for some companies – 314 non-financial listed companies for which the relationship between firm characteristics and IFRS compliance was analysed.

### *Measurement of IFRS Compliance*

Following similar prior studies, we implemented a self-built disclosure index to quantify and measure the level of adoption of IFRS disclosure requirements (Haniffa & Cooke, 2002; Al-Akra et al., 2010; Appiah et al., 2016). Using the disclosure index helped us to measure the level of disclosure of an item of information by companies and to calculate the percentage of disclosure scores recorded by each company, which in turn helped us to objectively and clearly operationalise the extent of disclosure (Wallace, 1988; Omar, 2007). Hence, in the following, we discuss the criteria implemented to determine which standards and disclosure items were incorporated in our self-built disclosure index checklist as well as the method employed to calculate the level of compliance with IFRS for the targeted companies.

#### Selecting IFRS

No theory governs the selection procedures or the number of standards that must be incorporated in the disclosure index (Marston & Shrives, 1991; Barako et al., 2006). From 1973 until the end of 2002, 41 standards were issued by the IASC, 28 of which are still active. From 2002 to 2016, 16 additional standards were issued by IASB, for a total of 42 active standards at the end of 2016. We intended to include the mandatory disclosure requirements for all of these standards. Nevertheless, the final disclosure index consisted of 27 standards as some were not applicable to the research context and focus. Hence, 379 disclosure items were included in the final disclosure index.

#### Scoring the Disclosure Items

Following prior work (e.g. Abd-Elsalam, 1999; Haniffa & Cooke, 2002; Omar, 2007) and using the un-weighted approach, a disclosure item was coded as 1 if the company disclosed it. A disclosure item was coded as 0 if it was applicable to the company but was not disclosed in the company's financial statements. Moreover, a disclosure item was coded as N/A (Not Applicable) if it was not applicable to the company. N/A was used to avoid penalising a company that did not disclose a non-applicable item and to lessen the level of uncertainty when calculating the disclosure index. Companies' annual reports were comprehensively reviewed in order to understand their operations and determine the applicability of the disclosure items (Cooke, 1989).

<u>Calculating IFRS Compliance</u>

To ensure the assignment of equal weights to the standards, we implemented the partial compliance method to calculate a company's level of IFRS compliance (Tsalavoutas et al., 2010). First, we separately calculated the level of compliance with each standard. Second, we summed the level of compliance of all standards to gauge a company's total compliance. Third, we divided the total by the number of standards applicable to the company. Thus, the final result can be expressed as a percentage: 0 indicates that the company did not comply with any disclosure item for any standard, while 1 indicates that the company complied with all items of its applicable standards.

Hence, the company's IFRS compliance level, using the partial compliance method, was calculated as follows:

$$CL = \frac{\sum S}{N}$$

Where:

**CL** is the company's compliance level ($0 \leq CL \leq 1$)

**S** is the company's compliance level with every standard

**N** is the number of standards that were applicable to the company

***Measurement of Firm Characteristics Variables***

Firm size was measured by calculating the logarithm of the total assets of each of the sampled companies; however, the value of total assets of each company was converted into US dollars before calculating the logarithm using the US dollar exchange rate for each country at the end of 2016 in order to mitigate the differences in the currency exchange rates and to unify the monetary measurement unit of all companies. Regarding profitability, the Return on Assets (ROA) ratio was calculated as a proxy for profitability by dividing net income over total assets. The total debt to asset ratio was used to measure leverage. The current ratio was calculated by dividing current assets over current liabilities to measure liquidity. To measure the industry type, we included five industry types – Investment, Industrial, Services, Energy and Real Estate – and, for each company, it was coded as 1 if it was in the sector and 0 otherwise. Finally, regarding the quality of the external auditor, companies audited by one of the Big Four auditing companies were coded as 1 and 0 otherwise.

***Data Analysis and Research Model***

To examine the proposed hypotheses, two types of tests were implemented. In more detail, to test H1, which concerned differences in the level of compliance among GCC countries, we implemented a *t*-test. Whereas, to test the other hypotheses, multiple regression analysis was implemented. We built the following research model, in which IFRS compliance was designed as the dependent variable and firm characteristics were designed as independent variables.

$$
\begin{aligned}
COMP_{it} = \propto_0 &+ \beta_1 FSIZE_{it} + \beta_2 PROFT_{it} + \beta_3 LEV_{it} + \beta_4 LIQ_{it} + \beta_5 IND\_INV_{it} \\
&+ \beta_6 IND\_INDS_{it} + \beta_7 IND\_SER_{it} + \beta_8 IND\_ENE_{it} + \beta_9 IND\_RST_{it} \\
&+ \beta_{10} EXAUD_{it} + \varepsilon_{it}
\end{aligned}
$$

Where:

$\boldsymbol{COMP_{it}}$: *the level of compliance with IFRS.*

$\boldsymbol{FSIZE_{it}}$ : *the natural logarithm of the total assets*[2].

$\boldsymbol{PROFT_{it}}$ : *measured by the ROA ratio.*

$\boldsymbol{LEV_{it},}$: *the total debts over the total assets ratio was used to measure the firm's leverage.*

$\boldsymbol{LIQ_{it}}$ : *the current ratio was used to measure the level of liquidity of the firm.*

***Industry sector was measured by five dummy variables: $\boldsymbol{IND\_INV_{it}}$(investment), $\boldsymbol{IND\_INDS_{it}}$ (Industrial), $\boldsymbol{IND\_SER_{it}}$(service), $\boldsymbol{IND\_ENE_{it}}$ (energy), $\boldsymbol{IND\_RST_{it}}$ (real estate): for each of these variables, a company was coded as 1 if it was in the sector and 0 otherwise.***

$\boldsymbol{\beta_{10} EXAUD_{it}}$: *a company audited by one of the Big Four auditing companies was coded as 1 and 0 otherwise.*

## Results

### *IFRS Compliance in GCC Countries*

Table 1 shows the level of compliance with IFRS mandatory disclosure requirements among the six GCC countries. As indicated in the table, across all targeted companies, the level of compliance did not exceed 80%. These results are consistent with those of previous studies, as most of these studies reported that the level of compliance with IFRS was between 70% and 80% (e.g. Tsalavoutas & Dionysiou, 2014; Al-Shammari et al., 2008; Tawiah & Boolaky, 2019). Moreover, the table shows that none of the targeted companies, among all GCC countries, had fully applied all of the disclosure requirements of IFRS as the highest level of compliance was 89.6%.

Table 1. Descriptive Statistics of IFRS Compliance

| Country | Minimum | Maximum | Mean | St Deviation |
|---|---|---|---|---|
| All GCC countries | .543 | .896 | .744 | .065 |
| Saudi Arabia | .543 | .827 | .713 | .065 |
| Kuwait | .572 | .872 | .730 | .064 |
| Oman | .576 | .896 | .768 | .055 |
| UAE | .693 | .875 | .792 | .042 |
| Qatar | .568 | .813 | .745 | .063 |
| Bahrain | .635 | .781 | .729 | .041 |

To examine the differences in the level of compliance with IFRS among GCC countries, we implemented a *t*-test, the results of which are provided in Table 2. The test demonstrated the existence of statistically significant differences ($p$ <.001) in the level of compliance within the GCC countries, which supports H1. Such results support the descriptive statistics presented in Table 1. The ranking of the GCC countries, according to their level of compliance with IFRS, is as follows: the UAE has the highest level of compliance, with an average of 79.3%, followed by Oman with an average of 77%, Qatar with an average of 74.3%, Bahrain with an average of 74.1%, and Kuwait with an average of 72.6%. Saudi Arabia has the lowest level of compliance, with an average of 71.3%.

Table 2. *t*-test Results

| | Sum of Squares | *df* | Mean Square | *F* | Sig. |
|---|---|---|---|---|---|
| Between groups | .309 | 5 | .062 | 17.459 | .000*** |
| Within groups | 1.357 | 384 | .004 | | |
| Total | 1.666 | 389 | | | |

*$p < .05$, **$p < .01$, ***$p < .001$.

### *Correlation*

Table 3 presents a Pearson correlation between the dependent variable and each of the independent variables. As recorded in the table, only two of the independent variables have a significant relationship with IFRS compliance: leverage and the quality of the external auditor. In more detail, leverage has a significant relationship with IFRS at the significance level of 1%, suggesting that an increase in leverage would increase the level of compliance with IFRS. Similarly, the quality of the external auditor was significant at the level of 1%, implying that having an external auditor from one of the Big Four audit companies would result in a higher level of IFRS compliance.

Table 3. Correlation Matrix of All Variables

| | IFRS Compliance | Firm Size | Profitability | Liquidity | Leverage | Investment | Industrial | Services | Energy | Real Estate | External Auditor |
|---|---|---|---|---|---|---|---|---|---|---|---|
| IFRS Compliance | 1 | | | | | | | | | | |
| Firm Size | 0.096 | 1 | | | | | | | | | |
| Profitability | -0.041 | 0.019 | 1 | | | | | | | | |
| Liquidity | -0.079 | -.190** | .127* | 1 | | | | | | | |
| Leverage | .203** | .290** | -.303** | -.504** | 1 | | | | | | |
| Investment | 0.04 | -0.078 | -.123* | .189** | -0.108 | 1 | | | | | |
| Industrial | -0.1 | -0.094 | -0.012 | 0.043 | -0.042 | -.320** | 1 | | | | |
| Services | 0.095 | 0.024 | .161** | -0.079 | 0.019 | -.213** | -.496** | 1 | | | |
| Energy | -0.049 | 0.023 | 0.053 | -.128* | .233** | -0.107 | -.248** | -.165** | 1 | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Real Estate | 0.025 | .167** | -.113* | -0.044 | -0.041 | -.142* | -.330** | -.220** | -0.11 | 1 | |
| External Auditor | .260** | .272** | .174** | -0.029 | 0.094 | 0.074 | -.323** | .170** | .126* | 0.086 | 1 |

**p* < .05, ***p* < .01, ****p* < .001.

### ***Regression Analysis***

The Variance Inflation Factor (VIF) was implemented to test multicollinearity among the research variables. As shown in Table 4, no multicollinearity was evidenced (Hair et al., 2010). We implemented multiple regression analysis to examine the relationship between firm characteristics and the level of IFRS compliance. Table 4 also shows the results of our regression analysis. The value of IFRS compliance of the model is $R^2 = .119$, $p < .001$. As indicated in the results, firm characteristics explain 11.9% of the level of compliance with IFRS. Additionally, the *F*-ratio indicates the goodness of the model and, given that the value of *F* is significant ($p < .001$), this implies that the model has the ability to explain the changes in the dependent variable. Industry type represents the sector to which a company belongs. We determined five groups of company operations: investment, industrial, services, energy and real estate. Hence, five dummy variables were created; however, as stated by Field (2018), one of the dummy variables had to be excluded and treated as a baseline group. Accordingly, we omitted industrial sectors as it represents most of the targeted companies (Field, 2018).

Table 4. The Results of the Regression Analysis for the Level of Compliance with IFRS

| Variable | B | Sig. | VIF |
|---|---|---|---|
| Firm Size | -.033 | .582 | 1.226 |
| Profitability | -.013 | .826 | 1.267 |
| Liquidity | .019 | .76 | 1.388 |
| Leverage | .225 | .001*** | 1.691 |
| Investment | .038 | .526 | 1.231 |
| Services | .045 | .459 | 1.299 |
| Energy | -.116 | .051 | 1.209 |
| Real Estate | .02 | .742 | 1.239 |
| External Auditor | .253 | .000*** | 1.249 |
| $R^2$ (adjusted $R^2$) | .119 (.093) | .000 | |
| $F$ for $\Delta R^2$ | 4.581** | | |
| Durbin Watson | 2.049 | | |

*Note: N = 314. The omitted benchmark sector is the industrial sector.*

*Adjusted $R^2$ is in parentheses*

*$p < .05$, **$p < .01$, ***$p < .001$.

As recorded in Table 4, a non-significant relationship exists between firm size and the level of compliance ($\beta$ = -.033, $t$ = -.552, $p$ > .05), which does not support H2. H3 postulated that there would be a significant relationship between profitability and the level of compliance with IFRS – however, the respective coefficient was not significant ($\beta$ = -.013, $t$ = -.220, $p$ > .05), which also refutes this hypothesis. A positive coefficient was detected for H4 ($\beta$ = .225, $t$ = 3.222, $p$ < .01), which posited a positive relationship between leverage and the level of compliance with IFRS. Therefore, H4 was accepted. The results for H5, which predicted a significant relationship between liquidity and the level of compliance, were not significant ($\beta$ = .019, $t$ = .306, $p$ > .05); thus, H5 was rejected. The results on the effect of industry type on the level of compliance with IFRS showed that none of the four sectors had a significant relationship with IFRS compliance: investment ($\beta$ = .038, $t$ = .634, $p$ > .05), services ($\beta$ = .045, $t$ = .741, $p$ > .05), energy ($\beta$ = -.116, $t$ = -1.958, $p$ > .05) and real estate ($\beta$ = .020, $t$ = .330, $p$ > .05), thereby refuting H6. Finally, the results ($\beta$ = .253, $t$ = 4.208, $p$ < .001) supported H7, which predicted a positive relationship between the quality of the external auditor and the level of IFRS compliance.

## Discussion

The findings of the current work indicate that the level of compliance with IFRS is statistically different among the GCC countries. Our results showed that companies operating in the UAE have the highest level of compliance with IFRS, whereas Saudi Arabia's listed companies have the lowest. These findings may be attributable to the nature of UAE companies, as most are international. As such, these companies are accountable to both local and external investors (Irvin & Lucas, 2006) and are therefore more motivated to adopt IFRS and have greater awareness of the importance of implementing these standards. In addition, the level of compliance with IFRS varies by individual standards. Some standards, such as IAS 1 and IAS 7, were recorded as having a high level of compliance (more than 90%) among the GCC countries, which could be due to the easiness of the items included in these standards. Other standards, such as IAS 19 and IAS 26, were recorded as having the lowest level of compliance, which may be due to the nature of these standards and the lack of expertise needed to apply them, as they require a very complicated accounting treatment (Tawiah & Boolaky, 2019).

Moreover, the empirical evidence – unexpectedly – supported only the theoretical argument concerning the effect of leverage and external auditor quality, not the hypotheses related to the effect of other firm characteristics (firm size, profitability, liquidity and industry type) on the level of IFRS compliance. Companies operating with higher leverage in GCC countries were reported to be more compliant with IFRS. This result is consistent with theoretical arguments based in agency and signalling theories. In addition, this result aligns with those of previous research, such as Al-Akra et al. (2010), Haji and Ghazali (2013), and Appiah et al. (2016), who found that companies with a high leverage ratio comply more with the disclosure requirements of the accounting standards. More important, Samaha et al. (2016), in their meta-analysis of 17 previous empirical studies, found a significant and positive association between leverage and IFRS compliance in developing countries. Within the context of GCC countries, although studies are scarce, existing empirical evidence is rather consistent with this result (Al-Shammari et al., 2008). Further, the existence of a highly significant relationship between external auditor quality and the level of compliance with IFRS relatively supports the arguments put forth by agency theory, as presented above, regarding the ability of the Big Four audit companies to effectively monitor companies' implementation of IFRS disclosure practices. This may be due to the ability of these audit firms to encourage their clients to adopt IFRS as the former have more resources and experience. This result is consistent with Omar and Simon (2011), Demir and Bahadir (2014), and Mbir et al. (2020) and, within the GCC context, it is similar to what was reported by Al-Shammari et al. (2008) and Abdelqader et al. (2021).

The absence of a significant relationship between the other firm characteristics indicates that agency and signalling theories seem to be relatively inapplicable within the GCC context, suggesting that other theories might be more relevant, such as institutional theory, which attributes companies' behavior to other factors, such as regulatory environments, national cultural differences and other institutional factors (Gray, 1988; Chau & Gray, 2002; Haak-Saheem et al., 2017; Herath & Alsulmi, 2017). As the institutional theory suggests, companies operating in emerging markets may be in a safe position, one in which they do not need to prove their financial position in the market. Therefore, they are more likely to restrict information only for those users who are involved in managing the company, which compels managers to be more selective in deciding which disclosure items with which to comply (Haddad et al., 2015). Additionally, several developing countries have a distinct culture, one associated with uncertainty avoidance, which may lead to restricting information disclosure in order to avoid competition and preserve security (Gray, 1988; Hassaan, 2012). Another explanation for such results could be the extent of the enforcement mechanisms in place to ensure compliance with IFRS (see Nobes, 2006; Rajhi, 2014). In other words, due to inappropriate enforcement mechanisms in emerging markets, non-compliance costs in terms of penalties are lower than those linked to compliance with IFRS (Dahawy & Conover, 2007), in turn affecting the level of compliance with IFRS.

## Conclusion and Implications for Theory and Practice

This study explored the level of compliance with IFRS requirements in GCC countries and examined the effect of firm characteristics on IFRS compliance. Our findings demonstrated the following: First, statistically significant differences existed in the level of compliance with IFRS among GCC countries. Second, highly leveraged companies and those audited by Big Four external auditors are the main determinants of the level of compliance with IFRS in the GCC region. Finally, firm size is not a factor in determining the level of compliance with IFRS, and companies in emerging markets do not fully comply with IFRS regardless of their level of profitability and liquidity or the type of industry in which they operate.

The effectiveness and extent of enforcement procedures play a significant role in determining and monitoring companies' disclosure practices. However, in emerging market settings, it was evidenced that the cost of non-compliance, in terms of penalties, is lower than the cost of compliance with IFRS (Dahawy & Conover, 2007). Hence, companies in emerging markets are less motivated to comply with IFRS, as evident by the current findings, which demonstrated a lack of full compliance with all of the IFRS disclosure requirements among any of the targeted companies. The latter has some important implications for theory; for instance, such results, although they further enhance our understanding of the arguments put forward by legitimacy theory in relation to following rules and regulations to avoid penalties and to maintain legitimacy, but they also impose some limitations. Companies within the GCC region seem to maintain their legitimacy without actually following the stated rules and regulations. Hence, there seem to be a gap between theory and practice and some local institutional arrangements need to be revised to ensure better IFRS compliance overall.

A further implication for the legitimacy theory is the existence of a significant positive relationship between leverage and the level of compliance with IFRS, which assumes that companies with high leverage have a higher level of compliance with IFRS due to restrictions enforced by banks over their clients regarding the disclosure of the information required to confirm their capacity to pay their debts. Moreover, the role of external auditors in ensuring that their clients have a high level of compliance with IFRS supports the relative applicability of agency and signalling theories within the GCC context. As signalling theory states, the quality of an external auditor can be considered an indication of the firm's value (Hossain et al., 1995).

In relation to agency theory, it is suggested that the independence of external auditor mitigates managers' opportunities to manipulate earnings and helps to monitor their actions to ensure the integrity of financial reporting (Chung et al., 2003; Hasan et al., 2013). The absence of a significant relationship between both profitability and liquidity and IFRS compliance indicates a rather lower extent of the relevance or applicability of the propositions of agency theory, which posits that managers attempt to justify their compensation, enhance shareholders' confidence and mitigate conflicts of interest between managers and owners. Moreover, these results do not relatively support the tenets of signalling theory, which assert that companies with high profitability and high liquidity will disclose more information to the users of financial statements to signal their good performance and emphasise their capacity to repay their debts to owners and lenders.

We also considered a number of implications of our research at the practical level. Policy makers and stock exchange market authorities need to increase the degree of compliance with IFRS by strengthening their monitoring and enforcement actions, as the current findings confirmed that none of the targeted companies had fully complied with all of the disclosure requirements of IFRS. This was justified by the lack of an adequate regulatory framework of enforcement mechanisms, which entailed that non-compliance costs were lower than compliance costs. The latter is an important issue and should be taken seriously by policy makers as it could be a game changer when it comes to IFRS compliance within the Middle East in particular and the wider developing markets context in general.

Additionally, IFRS disclosure requirements originated in developed countries, and hence more attention should be given to the application of these requirements to developing nations. It is essential to emphasise awareness of the importance of complying with IFRS among all parties in charge of enforcing such compliance. This could be achieved by conducting workshops and training programmes by professional institutions in these countries to familiarise the compliance monitoring staff and accounting professionals with IFRS updates and their best application practices.

***Limitations and Future Research***

Despite the contributions provided by the present work, we acknowledge some limitations. First, only non-financial companies were included in the analysis as the disclosure practices of financial institutions are governed by a different set of rules and regulations. Therefore, financial institutions could be addressed in future research to provide a comparison between the disclosure practices of financial and non-financial institutions. Second, we implemented a cross-sectional design that did not allow for the establishment of causal links among the research variables (Darwish et al., 2016). To do so, and to mitigate the time-lag effect between firm characteristics and IFRS compliance, future research could implement a longitudinal design. Third, future studies could include other firm characteristics, such as listing status, multi-nationality and ownership structure, to examine the effect of these characteristics on the level of compliance with IFRS. Finally, we considered including the data of annual reports issued for the years 2019 and 2020, however, these annual reports were issued during the pandemic period, which might affect the reliability of the results. Hence, future research could examine our suggested relationships for the years 2019 and 2020, and further, compare the results of the period before and after the pandemic.

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## Appendix A

| Study | Country | Level of compliance |
|---|---|---|
| Tsalavoutas (2011) | Greece | 79% |
| Tsalavoutas and Dionysiou (2014) | Greece | 79% |
| Cascino and Gassen (2015) | Germany and Italy | Germany 67%/ and Italy 68%. |
| Devalle et al. (2016) | Italy | 73% |
| Demir and Bahadir (2014) | Turkey | 79% |
| Alanezi and Albuloushi (2011) | Kuwait | 72% |
| Juhmani (2017) | Bahrain | 81% |
| Al-Shammar et al. (2008) | GCC | 75% |
| Tawiah and Boolaky, 2019 | 13 African countries | 73% |
| Fekete et al. (2008) | Hungarian | 62% |
| Putsai and Mkhize (2021) | SOUTH AFRICA | 84% |
| Al-Akra et al. (2010) | Jordan | 79% |