

The accounting development and IFRS adoption in selected MENA countries

1.0 Introduction

This paper examines accounting development in four Middle East and North Africa (MENA) countries with a view to explaining the need for adoption and sustenance of IFRS. Although a strand of the previous literature argued that accounting practices in a country are affected by its level of economic development and the dynamics of its accounting needs (Radebaugh, 1975; Nobes, 1998, 2008), another strand contended that accounting systems and practices among countries differ because of differences in their legal systems, past history, colonial influences, economic systems and culture (D'Arcy, 2001, Boolaky, 2004; Ding et al., 2005; Cieslewicz, 2014). As such, it has been widely argued that countries with similar cultural background and colonial influences are more likely to use similar accounting systems and standards (Nobes, 1983; Gray, 1988; Cieslewicz, 2014). However, this argument is gradually losing ground because emerging evidence suggests that, countries with different colonial influences and cultural backgrounds are harmonising their accounting systems and standards with the international financial reporting standards (IFRS) (see Liu et al., 2011).

The current wave of globalisation favours the adoption of IFRS in most countries. Evidence from the literature suggests that IFRS adoption improves market developments and constitutes a key strategy used in stimulating investments and economic growth in developing economies (Perera and Baydoun, 2007; Hassan, 2008; Ramanna and Sletten, 2009; Assenso-Okofu et al., 2011; Ben Othman and Kossentini, 2015). Furthermore, code-law countries and Islamic jurisdictions such as Jordan, Kazakhstan, Egypt and UAE (United Arab Emirate) are moving toward adoption or adaptation of IFRS (Zeghal and Mhedhbi, 2006; Boolaky, 2007; Irving, 2008; Nobes, 2008; and Al-Akra et al., 2009). Hence, it is important to understand the pattern of accounting environment for these countries particularly accounting development, IFRS adoption and sustenance given the regional or country-specific differences.

Despite the upward trend in IFRS adoption across different regions of the world, the benefits of a uniform set of accounting standards remain debatable. For example, in the context of Central and Eastern European (CEE) countries, Chau et al. (2013) concluded that IFRS adoption enhances quality and stability of the financial markets. In the same direction, the introduction of mandatory adoption of IFRS is said to enhance comparability (De Fond et al., 2011; Brochet et al., 2013). However, Sunder (2011) argued that a mandatory IFRS regime

will prevent the opportunity to make comparison of alternative practices and potential learning arising therefrom. Also, Fifield et al.'s (2011: 26) finding that "the impact of individual IFRS varies in importance from one country to another" has led to a call for a multi-country perspective for future IFRS studies – a call being heeded by our study. Although some previous studies have highlighted the relevance of IFRS to financial markets and economies (see Melgarejo et al., 2016; Ben Othman and Kossentini; and Mardini et al., 2012), there has been little evidence in support of accounting development towards IFRS adoption and implementation in a summarised quantitative format for understanding of various regions.

As such, based on the mapping of the political-economic development of four MENA countries and the impact they have on their accounting practices, this study adopts some unique accounting development indices (as opposed to the use of classical economic indices as prevalent in the current body of literature). Within the context of institutional theory, the study assesses the four MENA countries' levels of accounting development and their readiness to adopt IFRS. The study is important because MENA countries continue to develop their potentials at a time when majority of Western countries – most of whom constitute the principal trading partners of the MENA countries – decided to harmonise their accounting practices by adopting IFRS.

Furthermore, MENA countries continue to attract a large number of investors across the globe due to the strategic position they occupy in the world economic equilibrium (Yu and Hassan, 2008). Therefore, reporting their level of accounting development and adoption of IFRS will be an interesting topic to investors, businessmen, auditors, regulators, trading partners and academics. Moreover, MENA countries operate under unique economic, political, legal and cultural environments underpinned by different levels of Islamic principles. Besides, Islamic culture and religion are also reflected within their educational and financial reporting systems (Haniffa and Hudaib, 2002). Hence, religious ethos and norms play a major role in influencing managerial decision-making at institutional levels including those relating to accounting and financial reporting.

Considering that previous effort to understand IFRS adoption in developing economies mainly focused on country-level economic determinants (see Castro-Gonzalez and Rios-Figueroa, 2014), qualitative analysis of historical development of certain events (see El-Firjani et al., 2014) and environmental factors specific to countries (Nobes and Parker, 2004;

Gray and Morris, 2007; Al-Akra et al., 2009), we argue that certain accounting-based indices can explain country's accounting environment in terms of need¹ for the adoption and sustenance of IFRS. In addition, none of the previous studies on accounting development focused on more than one MENA country using a comparative approach to understand differences in their accounting practices. Although in a pilot study, Phelps (2011) attempted to develop accounting development index (ADI) as a tool to measure a country's accounting performance and achievement, the study suffers from the main limitation on relying on survey data from self-assessed questionnaire that may be highly biased. Added to this, the study did not cover any of the countries used in our sample and the indices developed in the study were not intended to explain the need for IFRS.

In this regard, our study proposes additional useful determinants with much focus on accounting-related indices to answer the following research questions, namely: (i) is there a need for IFRS adoption among the selected MENA countries? (ii) are the selected MENA countries sufficiently developed in the accounting sense to sustain IFRS? It analyses the similarities and differences in the pace and level of the development of financial reporting in these countries and places the influence these developments may have on other countries (in the region) within the context of institutional isomorphism as most of the MENA countries attempt to seek legitimacy and success in the realm of financial reporting in a bid to woo foreign investors.

Consequently, two objectives are set: to establish key accounting development indicators for assessing the need of IFRS in the MENA countries, and to examine whether the MENA countries are ready for/sufficiently developed (in the accounting sense) to sustain IFRS requirements. Therefore, our study has potential benefits to stakeholders such as market participants, professional bodies, regulators and academics by decomposing the country-level development to institutional-level and providing some easy-to-compute accounting development indices for achieving the research objectives. The rest of the paper provides a review of related studies including a brief background of the selected four MENA countries, the link between regulatory framework, institutional culture and IFRS adoption and a review of the theoretical framework for the study. Section 3 discusses the data and research

¹ Need for IFRS adoption is defined as the desire for a country to adopt IFRS vis-à-vis the institutional pressures for change from within or outside the country (Booak, 2010). This need is justified based on certain evidence relating to economic, financial, political and sometimes social reasons that collectively define the accounting environment (see Al-Akra et al., 2009).

methodology adopted in the study. Analysis and discussions are presented in sections 4 and 5, while conclusion and implications of the study are discussed in section 6.

2.0. Literature review

2.1. A brief background to the selected four MENA countries

This study focuses on four economies in the MENA region, namely: Egypt, Jordan, Libya and UAE. The focus on these countries is mainly because of the size of their economies and the availability of relevant data. Additionally, data is limited to periods between 2003 and 2015 as this was the countries' most vibrant economic moments, although it captures the onset of the Arab Spring which would have affected the economies and their datasets, particularly in Egypt and Libya.

Arguably, MENA countries share a common heritage: including religious belief, language and geography, which underpin their social, cultural and economic lives (see Yu and Hassan, 2008). Nevertheless, the countries differ slightly in terms of colonisation. This impacts on their subsequent economic development and accounting systems and practices (Nobes, 1998; Guerreiro et al., 2008; Al-Akra et al., 2009). Although Egypt and Jordan had experienced foreign domination at different stages of their political development, Britain remained their last colonial ruler and gained independence in 1936 and 1946 respectively. Similarly, Libya was at different times under the domination of different powers. However, it gained independence from Italy (its last colonial ruler) in 1951. UAE also experienced foreign domination until 1971 when it gained independence from Britain.

Although the countries in MENA region possess varying degrees of natural resources, evidence suggests a stable annual growth rate in major economic indices (such as the annual GDP growth, GNI per capita and merchandise trade) in these countries with UAE showing the highest (see Table 2 of the Appendix). This may be due to the countries' abundant oil wealth coupled with aggressive economic policies (for some members) that continue to attract a high-level foreign direct investment (FDI) mainly from western countries (see Sbia et al., 2014). The major trading partners of the selected MENA countries include some key economies from Europe, America and Asia. For example, most of the MENA countries engage in trade with the UK, US, Italy, Germany, China, India and France. Many of these trading partners now use IFRSs in the preparation and presentations of their financial statements. For example, listed companies in Europe have started using IFRS for

consolidated accounts since 2005 while China has already adapted IFRS. India plans to adopt IFRS fully by 2017 (Srivats, 2013).

The principal reasons for transiting to IFRS are: (i) to align with the global trend and (ii) to have a similar reporting standard with their trading partners. Transiting to IFRS is therefore important for the MENA countries in order to demonstrate commitments to their trading partners towards improved and transparent reporting standards fostered by adopting/adapting IFRS. In this context, we argue that the accounting systems and standards used by the trading partners of these four MENA countries would influence their accounting development and move towards IFRS. A list of the trading partners and their accounting standards is presented in appendix 1 of World fact book (2008).

Reflecting about MENA region, vis-à-vis IFRS adoption, Mwaura and Nyaboga (2009) highlighted certain obstacles that hindered total IFRS integration. These are associated with unique features of the region such as diversity and individuality in comparison to the rest of the world. These differences are often reflected in the challenges around “culture, legal systems and tax” that must be addressed consistent with the practices of the companies (Mwaura and Nyaboga, 2009:37). In this connection, Haidar (2008) advocated a higher level of inclusion and representation of the MENA countries on the International Accounting Standards Board (IASB), as doing so, will ensure that future accounting standards (i.e. IFRS) and amendments to current ones are useful to the region. Based on country-level panel data from 14 MENA countries, Klibi and Kossentini (2014) assessed the effects of IFRS adoption on MENA's emerging stock-markets and found that IFRS adoption has had positive and significant impact on the region's stock-market development. Similarly, Apergis (2015:182) concluded that the adoption of IFRS enhanced financial reporting quality although differences were observed across MENA countries, perhaps because of “institutional, economic and regulatory environments”.

Many reforms have taken place within MENA countries that seemed to have impacted on the regulatory framework and development of IFRS (see Table 3 of the Appendix for summary). However, there were three main economic reforms in Egypt, namely: (i) liberalisation of national economy in 1970, (ii) comprehensive economic reform and IAS in 1991 and (iii) macro-economic and structural reform and modernisation in 2004 that have collectively explained a shift from state-ownership to more private-equity based accounting environment. For example, between 2001 and 2007, private investment rose by 13% and FDI by nearly 9%

(UNCTAD Report, 2006 and 2008). The government liberalised financial services, which means foreign investors were free to trade on the Cairo Stock Exchange. Although Jordan has faced episode of unrest that seemingly affected development of its financial institutions. Reforms in the country were consistent with Egypt except for its large dependence on external aid as a result of non-sufficient revenue to sustain the economy during the early years (Marashdeh, 1996). By agreeing to structural-adjustment program (SAP) with IMF, open-market oriented economy created a number of opportunities and market growth that produced some important and strong institutions such as Jordan Securities Commission, the Amman Stock Exchange and Securities Deposit Commission.

Unlike Egypt and Jordan, Libya's political and economic history has been dominated by uncertainty and 'fantasy' of self-styled mega-socialism of the 'Jamahiriya'. Economic reforms have followed this ideological route that seeks to distance the country as much as possible from the West. It is therefore not surprising that Libya did not have a stock-exchange until late 2006. However, the country has one of the largest deposits of oil and natural resources in Africa. This makes its economy stronger, although it faced major isolation from the West. The few firms with concession agreements, mainly UK and US, influenced the reporting and auditing practices in the country which made some links to the Western practices. In 1970, Libya started a strenuous nationalisation exercise (Ahmad and Gao, 2004; Ritchie and Khorwatt, 2007). In 2002, the Libyan Accountants and Auditors Association (LAAA) had 1369 members (Ahmad and Gao, 2004), 500 of whom were registered auditors (Ritchie and Khorwatt, 2007). In 2006, the Libyan stock-exchange was established with substantial and ongoing supports from both the UK and the US.

Similarly, UAE is another resource-rich nation that started its commercialisation agenda in 1969. However, its economy was well-diversified economy with non-oil sector's contribution to GDP rising from 35.4% in 1973 to 70% in 2003 (Kawach, 2003). A liberalised economic system made it attractive to multinational organisations. As in any country, the Central Bank regulates financial and banking activities. The Ministry of Economy and Planning are responsible for setting financial reporting requirements for companies in the country. The Commercial Companies Law (UAE Federal Law No. 8 of 1984) provides the legal framework for companies in the country. The Emirates Securities and Commodities Market Authority regulate the activities of participants in the capital market. One of the requirements for listing on the Dubai International Foreign Exchange is compliance with International

Financial Reporting Standards (Hussain et al., 2002). Additionally, the presence of a professional accounting association; the Accountants and Auditors Association created the need for compliance with IFRS.

2.2. Stock-exchange, regulatory framework, institutional cultures and IFRS adoption

Stock-exchange, as an institution, is important in transforming accounting practices. This is because, the listing rules for companies pave way in raising a stronger capital. This helps towards a successful embracement of subsequent regulations. Listing rules in most MENA stock-exchanges contain requirements of accounting and auditing standards as well as disclosure rules² (OECD, 2012). The rationale for setting rules (either on mandatory or voluntary basis) for market institutions is very clear in improving the behavioural practices of the player institutions. Using firm-year and country-month analyses of 26 countries, Daske et al. (2008) explored the economic consequences of mandatory IFRS on stock-market liquidity and cost of capital during the initial year of adoption. They found that, introduction of IFRS had led to increased market liquidity, decreased firms' cost of capital and increased equity valuation particularly in countries with high level of transparency and strong legal enforcement mechanisms. In addition, the study noted that the capital market's effects were more apparent in firms that voluntarily adopted IFRS before they became mandatory.

Similarly, Cascino and Gassen (2015) investigated impact of mandatory IFRS adoption on the comparability of financial accounting information, based on firm-level data obtained from Germany and Italy. They concluded that the impact was marginal, and the regional and country-level incentives were found to drive compliance. While they established that the incentives enhanced comparability, they noted that firms from countries with tighter reporting enforcement, seemed to have experienced higher comparability effects. Other studies have focused on culture and prevailing economic factors relative to the adoption and implementation of IFRS. For example, Cardona, Castro-Gonzalez and Rios-Figueroa (2014) examined such effects of culture and a country's prevailing economic factors on its IFRS implementation decision based on a sample of 69 countries. They concluded that, useful associations existed between the variables. Additionally, within the frame of Hofstede's (1980) cultural dimensions and some world economic forum (WEF)'s economic indices, they highlighted that "countries with better protection of minority shareholders' interests and a

² These include rules relating to material events, risk management related party transactions and insider trading.

larger foreign market size are less inclined to implement IFRS” and that “highly individualistic countries will have lower implementation scores”.

Moreover, Borker (2012) adopted Hofstede’s (1980) cultural dimensions and Gray’s (1988) derived accounting values (i.e. four hypotheses) to assess the culturally derived accounting orientations of the BRIC countries. The results indicated that, in relation to accounting disclosures, Russia and Brazil were more similar when compared to India and China. “Russia and Brazil exhibit cultural values associated with the development of accounting systems characterized by statutory control, uniformity, conservatism, and secrecy” as opposed to “values proposed to represent the profile for IFRS, i.e., professionalism, flexibility, optimism and transparency”. These values were, however, exhibited in both India and China. Therefore, when compared to all the G7 countries (with the exception of France), all the four BRIC countries exhibited higher power distance indices.

Furthermore, Lasmin (2012) examined how societal values in 40 developing countries could impact on their attitude toward globalisation of IFRS, based on combination of DiMaggio and Powell’s (1983) institutional isomorphism perspective with Gernon and Wallace’s (1985) accounting ecology framework. The study found that, national culture, (rather than economic pressures) had stronger impacts on developing countries` IFRS adoption decision. It also found that countries with high centralization of power, conservatism, and self-orientation may have reduced interest in IFRS adoption. The study concluded that the national accounting ecology of developing countries was not in equilibrium. It was established that countries with higher level of foreign aid and education were found to be more likely to adopt IFRS. Nevertheless, countries with higher FDI inflows and GDP growth were found to be less interested in adopting IFRS.

2.3. Theoretical framework: institutional theory

Institutional theory considers the institution as the pivot upon which the social structure rotates. The theory emphasises how social interactions, order and norms among social actors and groups are evolved, presented, disseminated and changed over times and spaces (Scott, 2004). According to Scott (2001: 48), institutional norms and practices form the bedrock of social interactions. As such, they are durable, transferable and capable of having both localised as well as international connotations. Social actors such as individuals, organisations and governments operate within a web of economic, cultural, legal and political

institutions; all of which directly or indirectly impact on their behaviours (Fligstein and Freeland, 1995). The theory stresses the need for organisations to conform to rules, norms and social values of their institutional environments for them to survive and achieve legitimacy (Meyer and Rowan, 1977). Additionally, it shows how individual or agencies may seek to construct legitimacy by simply attuning to expectations of those key players (whether individual or organisation) within the environment they operate.

Furthermore, it is widely argued that organisations that share similar institutional environments are likely to experience identical institutional pressures perhaps because of the competitiveness globalisation might have brought. These organisations therefore “tend to be isomorphic in their structures and behaviours to obtain legitimacy” (Gonzalez and Hassall, 2009:15). In addition, Scott (2001) identified three bases for such legitimacy: regulatory (which emphasises conformity to rules); normative (which stresses moral obligations); and cultural-cognitive (which places importance on taken-for-granted understandings).

Another dimension to institutional theory is institutional isomorphism. This can be described as a process that compels one organisation to be like other organisations facing identical environmental conditions. DiMaggio and Powell (1983) recognised three elements to institutional isomorphism. These include coercive (when organisations depend on external environments for resources to survive); mimetic (when organisations try to copy similar organisations that they perceive more legitimate or successful); and normative (which are associated with professionalisation).

Many studies have applied institutional theory in explaining certain social phenomena and adoption and implementation of IASs in particular (see Albu et al., 2011). Such phenomena include: how differences in economic institutions lead to divergent accounting practices among countries (Muller 1967, Nobes, 1998); how differences in legal institutions account for differences in governance system, market development and economic growth (La Porta et al., 1999); how changes in higher education systems impact on accounting education and educators (Gonzalez and Hassall, 2009). In line with Muller’s (1967) and Nobes’s (1998), this study draws on institutional theory to analyse the perennial institutional isomorphism that underpin the development of accounting as well as the adoption of IFRS in the four selected economies of MENA.

Specifically, the study uses the theory to understand how the activities of professional accounting bodies, accounting regulators, government agencies, Arab cultures and social values constitute institutional environments that generate pressures on the countries' accounting development. The elements of institutional isomorphism help to explain the MENA countries' plight in seeking legitimacy and success through the level and pace of accounting developments in their Western trading partners as well as the activities of international accounting bodies.

In the current literature, economic indicators (such as FDI, GDP) and financial market data (such as market capitalisation) have been used to explain IFRS journey in different countries. However, most of the studies were unable to adequately explain why countries that share common political, economic, religious institutions and union (such as MENA countries) can be at different stages of IFRS adoption. This is an important gap that this study aims to fill by developing accounting development indices to compare the countries' performance in IFRS adoption and implementation. Institutional theory is found to be a suitable theoretical framework to help explain the accounting development of a region that has rigid institutions based on their strong religious beliefs. In the next section, strategies used in designing the research tools are explained.

3.0. Research methodology

Some of the past studies used classical economic indices as indicators to determine accounting development even though these indices are not directly related to accounting development and IFRS adoption (see Cooke and Wallace, 1990; Boolaky, 2012). For example, Gernon et al. (1987) contended that there is a positive relationship between education level and the competence of accountants. Similarly, Larson (1993) used the general literacy rate, in the absence of more relevant data, as an indicator of a country's ability to deal with complex accounting, and gross domestic product as a measure of accounting development in a country. This has been criticised in the literature on the grounds that accounting literacy is a more specific indicator of a country's ability to deal with complex accounting systems (see Adhikari and Tondkar, 1992; Samuels, 1993).

However, Zeghal and Mhedbhi (2006) used Larson's argument to support their analyses on accounting development and IFRS adoption in 32 countries. They suggested that the existence of a capital market was an important factor that influenced adoption of IFRS in a

country (a finding that supported Abdelsalam and Weetman (2003). Unlike previous studies, however, this paper provides appropriate evidence to substantiate the level of accounting development and assess whether the sample MENA countries are developed enough to use IFRS. Our study contends that there are more specific indices, other than the classical economic indices, that could provide evidence on the accounting development stage of a country and its readiness to use IFRS. It uses ADI listed in Table 1 to achieve the research objectives.

3.1 Indices for accounting development

Table 1: List of accounting development indices (ADI)

	Indices
1	Number of listed companies per million of population
2	Growth in stock-exchange using number of listed companies
3	Growth in market capitalisation
4	Market capitalisation per million of populations
5	Market capitalisation/GDP
6	Number of accountants per million of population
7	Number of accountants per listed companies
8	Financing through bank equity*
9	Innovation and sophistication index*

Sources: *World Economic Forum data to 2015.

3.2 Sample, data collection and analysis strategies

MENA region constitutes approximately 22 countries. This study focuses on four MENA countries that were purposively selected for certain reasons. Firstly, they have a similar religious background though Egypt has a remarkable record of the Pharaonic history. However, our study has not investigated the link between Pharaonism and accounting. Secondly, the World Bank had estimated surge in the flow of capital globally in the 1990s, however, MENA's region accounted for only 2% and with little progress thereafter (Yu and Hassan, 2008). Subsequent UNCTAD reports on the observance of standards and codes (UNCTAD Report 2002, 2004 and 2008) indicated that, some countries rapidly progressed in compliance with standards (e.g. Jordan) and codes while others such as Libya progressed slowly. Within the sample, we have considered both types of countries with a view to establishing reasons for such differences. Thirdly, UAE is rich in oil and gas reserves as

Libya. It is interesting to understand why should both nations from same economic region would have different accounting development.

In this regard, relevant secondary data were collected from credible sources and analysed based on ranking and comparison of such indices across countries. While World Bank database and stock-exchanges of each of the four countries were used to access data related to (i) number of listed companies, (ii) market capitalisation, (iii) gross domestic product, the association of accountants' websites were considered in obtaining data on the number of accountants. Data on population size was collected from World Bank Indicators database (2010). Data on index 8 (financing through bank equity) and 9 (innovation and sophistication index) were collected from the WEF database, particularly Global Competitiveness Reports (from 2003 to 2015). To assess the status of accounting development in the selected countries for comparison, the UNCTAD Reports (2002, 2004 and 2008) were also used. Findings in these reports served as evidence to support our discussion of accounting development in the MENA countries.

To analyse our data, unique indices specific to accounting development as opposed to classical economic development indicators were developed. A country may be highly developed economically but not necessarily developed in accounting and vice versa (Nobes, 1998; Boolaky, 2004). For example, Boolaky (2004) used a set of accounting indicators on 28 African countries and inferred that some countries that were classified as less developed in economic terms are, however, classified as developed in accounting.

Although effort is made to discuss rationale for the measurement strategies of each index, our study mainly adopts a descriptive and comparative analysis of the data in measuring the indices. While we aim to analyse country-specific accounting development indices based on the available data, appropriate inter-country comparison is performed to justify the current state of accounting development within states/countries.

3.3 Index definition and measurement strategies (*accounting development indices*)

Index 1: Number of listed companies per million of population

Nobes (1998) pointed out an increased need for external financial reporting if a country has a large number of listed companies relative to its size. Within the context of institutional framework, pressure from the growing number of companies seeking to be listed on countries stock-exchange will likely increase the need for external reporting. This index is more robust

because it considers the listed companies relative to the increasing number of population (another institutional control that may exert pressure on the countries accounting need). However, less listed company in a country translates that external financial reporting to the stakeholders is less important. Thus, the number of listed companies in a country affects its accounting systems and standards need. Boolaky (2004) used this index to determine whether a sample of 28 African countries could be classified as developed countries ready for external reporting and IFRS. The study found challenged classification of some developing countries (in economics term) under the classical economic index because they could have qualified as developed countries (in accounting term) when accounting index is used. For example, a country may have a low GDP and, yet it may have a vibrant stock-exchange and a large number of listed companies.

Index 2: Growth in stock-exchange using number of listed companies

The growth in the number of listed companies over time also indicates the need for external reporting. Furthermore, the rise in the number of listed companies also indicates the depth of the market to support new capital issues from the public rather than loans from the banks. Globalisation has increased the incidence of cross border listing, and thus where new entrants on the market have a higher reporting need, this may increase the incentive to use IFRS (Boolaky, 2004). This represents another institutional pressure that may trigger change in the country's accounting development.

Index 3: Growth in market capitalisation

Market capitalisation indicates the participation of private investment in the economy of a country. If this indicator rises, it implies that there are more businesses in the country (Nobes, 1998; Boolaky, 2004). This is signalled by the growth rate in the market capitalisation over time. When the number of private businesses increases in any country, the supply of information becomes critical and therefore an increased need for a more transparent accounting systems and practices, hence IFRS adoption (Judge et al., 2010). Increase in the market capitalisation can be translated as a good indication of institutional impact on the investors. This may be awareness following a government policy or from the educational institutions within the state. Hence, we measured this variable using percentage change in the total stock traded over the period considered in the sample and based on Table 2 of the appendix.

Index 4: Market capitalisation per million of population

This index is computed by dividing market capitalisation by million of population. It explains the participation of the community in raising capital for private sector in the country. It also gives an indication of a country's business culture. Countries with high index of market capitalisation per million of population require more transparent reporting than one with a low index. Besides, lack of transparency could have catastrophic impact on a country's economic growth. When companies are less transparent, users of financial statements may not get sufficient information for decision-making purposes.

Index 5: Market capitalisation as a percentage of GDP

Compared to index 3, market capitalisation as a percentage to GDP expresses market capitalisation as a ratio of total production of goods and services in a country. It indicates the contribution of private investment activities to the total output of goods and services in an economy. As a volume indicator, increase in this index suggests increase in private investment activities which would necessitate rise in commercial accounting and reporting needs within the economy. Therefore, it is a good indication of involvement of private sector in the country's economic development and potentially drive for more corporations to improve financial reporting. Hence, this may exert institutional pressure for a country to opt for IFRS adoption given its capital market need to move the economy forward.

Index 6: Number of accountants per million of population

The level of accounting education is another indicator that can be used to determine accounting development of a country (Boolaky, 2012) and use of IFRS (Judge et al, 2010). This is measured by deflating the number of qualified accountants by the population size in the country. It shows the accountancy professional capacity in addition to the growing size of the institutions that require accounting services. The lower this index is, the less the country's capacity to sustain sophisticated accounting system and practices.

Index 7: Number of accountants per listed companies

This index is relevant and more specific to listed companies because it shows a country's capacity to meet the accounting and reporting needs of the listed companies in a country. The number of accountants is scaled by the number of listed companies because all listed companies require their accounts prepared in accordance with relevant regulatory framework. A low score on this index also indicates that the country will have to train more accountants

to sustain the accounting needs of the economy while a high score in this index may also impact on the readiness of a country to use IFRS.

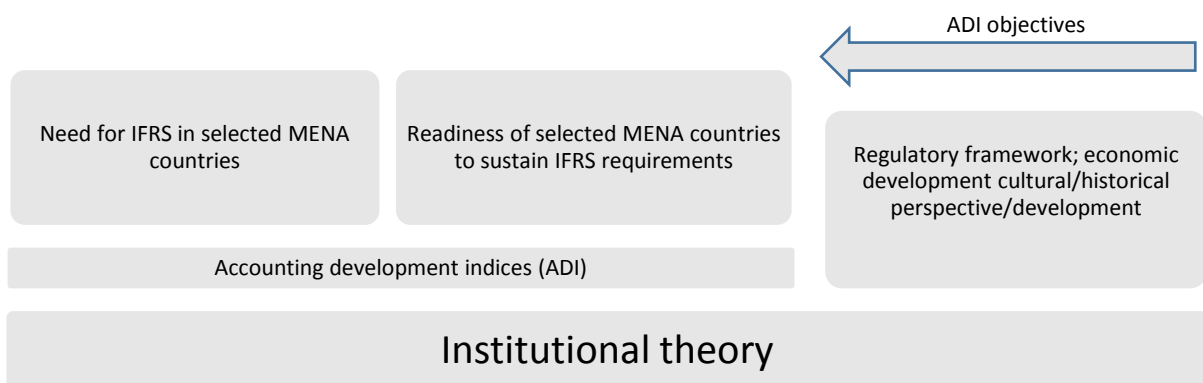
Index 8: Financing through bank equity

Drawing from Nobes (1998), if a country’s financing system is dominated by bank financing rather than capital market financing, the need for external reporting diminishes. This is because the number of users involved in equity financing is small and reporting could be mainly to meet their needs rather than the needs for tax reporting or filing of accounts with Registrar of companies. In this regard, equity financing prompt external reporting and adoption of IFRS to attract investments depending on government investment strategies.

Index 9: Innovation and sophistication index

This index indicates a country’s level of innovation and sophistication could impact on its move towards adapting or adopting sophisticated systems and practices. Developing countries may have a low score index because investment in innovation may not be their priorities. Some developing countries are still focusing on poverty alleviation and most of the economic resources are channelled in that direction. However, a country with a high score index is an indication that it will have an equivalent accounting system and standard to sustain the innovations.

Figure 1: Framework for understanding IFRS adoption/adaption in MENA Countries



Authors’ compilation from review of related literature (2015)

Figure 1 presents a summary of the emerged framework for understanding IFRS adoption/adaption in MENA countries based on review of previous studies and our research strategy. Within the boundary of institutional theory, two main objectives for constructing ADI (in this study) can be achieved using the recommended indices in the light of regulatory framework, economic/political/cultural development in MENA region.

4.0 Results and discussions

This section reports the findings generated from the accounting development indices followed by analysis of current status of IFRS implementation in the sample MENA countries. The indices reported in Table 2 provides information required to achieve the following objectives: (i) to establish key accounting development indicators for need of IFRS in the MENA countries; and, (ii) to assess whether the MENA countries are ready for/sufficiently developed in the accounting sense to sustain IFRS requirements. For the procedures followed in deriving each of the index, refer to Table 2 of the Appendix.

Table 2: Cross-Country Analysis: Accounting Development Index

Indices	Egypt				Jordan				Libya				UAE			
	2003	2007	2011	2015	2003	2007	2011	2015	2003	2007	2011	2015	2003	2007	2011	2015
1	13	6	3	3	31	43	33	25	NA	1	4	4	7	13	13	14
2	-0.19	-0.14	0.01	0.00	0.19	0.07	-0.02	-0.02	-	0.16	-	-	0.14	0.72	-0.01	0.00
3	-	0.56	0.08	-0.32	1.04	0.56	-0.30	-0.27	-	NA	-	-	3.41	0.49	0.20	-0.14
4	-	17.5	5.69	5.89	-	65.94	35.89	27.79	-	NA	NA	NA	67.7	208.8	108.1	213.9
5	0.88	1.07	0.21	0.17	2.90	2.39	0.94	0.68	-	NA	NA	NA	0.20	0.49	0.27	0.55
6	350	400	253	256	79	98	97	101	-	83	89	89	NA	NA	NA	NA
7	66	75	94	86	2	3	2.98	4.07	-	NA	NA	NA	NA	NA	NA	NA
8	-	4.7*	4.30	3.80	-	5.2*	3.80	4.20	-	2.20	NA	NA	-	5.20	4.20	4.70
9	-	3.5*	3.30	3.23	-	3.9*	3.50	3.99	-	3.20	NA	NA	-	4.10	4.43	4.83

Source: Data collected from World Economic Forum and individual country/institutional websites.

*The figures are the index score and the countries were ranked out 134 countries. Note that N/A means data not available. In the case of Libya, the uncertain security situation did not allow the Survey to be conducted for 2011 onward.

*For index 8 Egypt ranked 49, Jordan 22, Libya 131 and UAE 23. For index 9 Egypt ranked 74, Jordan 47, Libya 102 and UAE 34.

Table 2 presents results of the indices computed based on the discussions on each index in the methodology section and formulae presented in Table 2 of the appendix.

(i) An assessment of the need for IFRS among selected MENA countries

Consistent with Nobes (1998), the need for external reporting in a country increases when a that country operates a capital market as an institution. Results from index 1 in Table 2 indicate that all four MENA countries operate a stock-exchange for several years, except Libya whose stock-exchange is very recent (i.e. 2016). This is not surprising because Egypt seemed to be more integrated with Jordan and UAE than Libya. This interprets that the three countries might share similar environmental pressures that made their organisations to be isomorphic in structures and behaviours with a view obtaining legitimacy as a region (see Gonzalez and Hassall, 2009). In terms of growth in the number of listed companies on the

stock-exchange between 2003 and 2015, Jordan and UAE witnessed a growth in the first half of the sample period (i.e. 2003 to 2007 at 19% & 70% and 14% & 72% respectively). However, a decline can be observed in the second half at 2% and 1% for Jordan and UEA respectively. This implies that more equity finance than bank credit was used to finance investment activities in these countries. As the need for more capital arises, due to changes in the institutional forces, issue of shares to the public becomes more optimal strategy that indicates a need for IFRS.

As country's business culture develops, it will need more transparent accounting and reporting framework. From index 4 in Table 2, all the countries show a growth in market capitalisation per million of population in the first two periods observed in this study (i.e. 67.74 to 208.81, NA to 65.94 and NA to 17.51 for UAE, Jordan and Egypt respectively). However, despite a decline in the indices in 2011 for all the sample, Egypt and UAE have achieved increase from 2011 to 2015 (i.e. 108.07 to 213.97 and 5.69 to 5.89 respectively). This decline may be related to the Arab Spring. The increase during the period explains that, propensity of the community to participate in raising capital has increased thereby creating a need for more transparent financial report. That is why the Stock Exchange Acts in many countries require companies to prepare financial statements according to IFRS (Nobes and Parker, 2008). This can be translated in the context of institutional isomorphism given that these countries share institutional environment that may likely exact institutional pressures as highlighted in Scott (2001).

Economic development in a country requires the participation of both private and public enterprises except in communist states where the government is the central economic player. In a market economy, it is important to know the contribution of private sector to the national economy. When market capitalisation represents a high ratio to the GDP, it indicates that the private sector is actively involved in economic development of a country. Though no data was available for Libya, the findings indicate that there is a huge participation of private sector in the other three countries as revealed by index 5 results (see Table 2). This is very strong in the case of UAE due to the buoyant capital market of Dubai and Abu Dhabi. Both countries are located within Middle East rather than North Africa which stresses further an influence of immediate institutional environment. In these two places IFRS are being used in the context of public listed companies.

Based on the indices (1-5) we analysed, each of the countries shows a need for transparent external reporting to cope with the pattern of development in the accounting indicators during the period. For example, since the 2000s, Egypt has made a move towards IFRS adaptation. Jordan has also demonstrated its move towards IFRS, first by fully adopting the IFRS and secondly, by passing new law(s) to enforce compliance (Al-Akra et al., 2009). UAE is a special case. Not all the states of UAE have IFRS as a requirement in place, except Dubai and Abu Dhabi that are coincidentally the two main commercial centres with significant number of the listed firms.

The need for external financial reporting and IFRS might have arisen as a result of pressures from the trading partners and international bodies (such as the World Bank and IMF)³ as highlighted in the one of the dimensions of institutional isomorphism called mimetic isomorphism (see DiMaggio and Powell, 1983). In the case of the selected countries, the UNCTAD reports on the need to shift towards IFRS implementation in order to (i) attract FDI, (ii) to increase transparency in accounting report and (iii) to comply with international standards (UNCTAD Report, 2002, 2006). Therefore, these external pressures and the institutional changes revealed from the analysis of the indices, might have collectively driven the need for a country to adopt IFRS.

On the other hand, majority of the trading partners of these four countries (listed in Table 3) are already using IFRS either in full or in part. This may exert some pressure on MENA countries to move for IFRS in the light of the changes driven by trade with their partners. For example, listed companies in the EU have been required to comply with IFRS since 2005 and undoubtedly many of them transact businesses with MENA countries either as a major supplier or customer. This situation best fits the mimetic isomorphism when the countries re-strategise to fit in with their partners upon the conditions set for them to comply with (see DiMaggio and Powell, 1983 and Gonzalez and Hassall, 2001). To enable an effective and efficient decision making based on financial reports, they will need transparent and comparable reports. In this case, the MENA countries would have to adjust their reporting standards and systems to meet the need of their major trading partners. In the light of DiMaggio and Powell (1983:150)'s definition of coercive isomorphism, both formal and informal pressures on an organisation may have come from other institutions to which it

³ More examples can be found in various versions of the reports on the observance of standards and codes (i.e. UNCTAD Report, 2002, 2004, 2008) and Boolaky (2010).

depends and ‘cultural expectations’ related to the society within which the organisation operates. In the next sub-section, we discuss the capability of these countries to sustain IFRS.

(ii) *Development capabilities and Readiness of the selected MENA countries to sustain IFRS*

This subsection and related analysis attempt to address the second objective of the paper. The strategy used to answer the related question is as follows. We examined evidence from the accounting development indices computed relative to the major trading partners, namely: the UK, the US, Italy and Germany for benchmarking purposes. The four MENA countries together with their four trading partners are ranked based on three indices, namely: Index 1, Index 4 and Index 5⁴. The results for three indices are reported in Table 3.

Table 3: Ranking the four MENA countries with their trading partners

Countries	Index 1	Ranking	Countries	Index 4	Ranking	Countries	Index 5	Ranking
UK	44	1	US	79	1	UAE	15	1
Jordan	43	2	UK	66	2	Jordan	3	2
US	18	3	UAE	32	3	UK	2	3
UAE	13	4	Germany	17	4	US	2	3
Germany	8	5	Jordan	7	5	Egypt	1	5
Egypt	6	6	Egypt	2	6	Germany	1	5
Italy	5	7	Italy	2	7	Italy	1	5
Libya	4	8	Libya	N/A	8	Libya	N/A	8

Sources: Various sources. N/A means data not available.

On the basis of index 1 of Table 3 (number of domestic listed companies per million of population), Jordan ranks second, before Italy, Germany and the US, whereas UAE is ahead of Italy and Germany, followed by Egypt which is before Italy. Exceptionally, Libya is last in the rank and this is proven by the young age of its capital market. Considering the previous review of the market and institutional development in the country, it considered low market development as a solution that fits very well with its socialist policy for its growing population. This is not surprising when the notion of socialist economies is reflected upon and their strong opposition to private ownership (see Sheibani and Havard, 2005). This finding lends support to Lasmin (2012) who also documented that national cultures have significant influence on the IFRS adoption among countries. Additionally, the institutional composition of Libya was entirely different from other countries considered in this study. For

⁴This is because data on the other indices for the trading partners are not available. For example, index 6 could not be computed for the UK because the data available refers to the total number of members of the four professional accountancy bodies. This is too general because the members also include those who are foreign members and are practising in foreign countries. The authors therefore believe that by deflating the number of members of these professional bodies by population size would be misleading.

example, Libya was perceived as mainly resource dependent nation and particularly when oil and gas was the main source of energy to many economies including the West. Libya as one of the major OPEC producing countries had consistently appeared at the 8th position throughout the three rankings of the indices in Table 3.

Furthermore, the outcome of the index analyses indicates that the first three MENA countries in the ranking had an equity market which was stronger, when measured in terms of the number of listed companies on the exchange per million of population. As it can be observed, ranking for some MENA countries was higher than some of their trading partners who were already using sophisticated accounting and reporting standards. Our argument is that Egypt, Jordan and UAE already have a business environment sufficiently developed to necessitate the use of IFRS. Trade activities were mainly the sources of livelihood in the countries except for the UAE that has expanded on the trade relationship following oil discovery in commercial quantity. This interpretation is supported by the findings reported in index 2 on the growth rate of the stock-exchange through the increase in the number of listed companies over time. In other words, the institutions in the three countries were transformed in a consistent manner with the internal demands for capital and government policy.

Similarly, results obtained from index 4, which measures market capitalisation deflated by the population size, indicate that UAE ranks just after the two leading western economies, viz: the UK and the US. This is expected considering the current state of FDI in the nations and different performance levels of the economies. Jordan ranks ahead of Italy based on the index. This result signals that the participation of outsiders in the raising of capital on the stock-exchange is higher in UAE than Italy and Germany. In other words, UAE is therefore classified as an economy with a strong equity market (i.e. more private sector participation) compared to the other countries (see indices 4, 5 and 8) thus justifying the readiness of UAE for IFRS. This lends support to Nobes (1998). It should be noted that on the basis of certain economic indicators, such as GDP, the decision to have placed the UAE ahead of other countries could have been different given the oil revenues being generated by the country.

Consistently, index 3 on market capitalisation growth confirms the role of the equity market in the economy, a finding that supports accounting development indicator for IFRS adoption. The developmental need of the institutions to source capital from the public members (including outside the UAE) has witnessed steady growth by virtue of the environment created by the government. This is consistent with results obtained by Apergis, 2015). Index

(5), market capitalisation as a percentage of GDP indicates that UAE and Jordan are better positioned than even the US and UK. This is a good indication of readiness of the market relative to the economic growth of a country. In this case, we argue that the private sector plays a key role in the business of the economy and hence an important justification for IFRS. These results are consistent with Albu et al. (2011) who also interpreted results based on institutional theory. Therefore, this interprets that private sector-driven institutions will extend the quest for capital beyond the boundary of a nation in order to achieve their strategic goal to maintain trade with their chosen partner, particularly in this competitive environment.

In this regard, government policy will evolve in support of such environmental norms and practices. By so doing, a conducive business environment is created for the social actors that may collectively attract international investments. Consistent with institutional theory assertion, the institutions operating within a specific country find themselves under such environmental pressure. Consequently, need for IFRS is inevitable in such types of countries in order to win the confidence of investors by enhancing quality of the financial reports and imposing some listing requirements for companies (see Apergis, 2015). Egyptian, Jordanian and UAE listed companies are required to prepare and present financial statements in compliance with IFRS, though not required for all domestic unlisted companies, except banks (IAS PLUS-Deloitte, 2009). Additionally, in countries like Jordan and UAE, domestic companies are strongly encouraged to apply full IFRS or IFRS for SMEs (IAS PLUS-Deloitte, 2016).

To this end, the readiness of any country in the globe for IFRS adoption and implementation will always remain a debatable issue because there are numerous factors that determine the answer to this question (Samaha and Khlif, 2016; Kolsi, 2017; Kamel and Awadallah, 2017 Outa et al., 2017). However, in addition to country past-history and economic system (e.g. in the case of Libya), one key determinant that is discussed in this study is the professional accountancy capabilities of a country. For this reason, the authors have deflated the number of accountants by population size and then by number of listed companies. Except Libya, the other three countries (Egypt, Jordan and UAE) are reported to have a relatively sufficient number of accountants per listed companies to sustain the demand of IFRSs (see indices 6 and 7 in Table 2). Despite the evidence in support of growing number of accountants, it is presumed that there is a need for increase as well as a development/training programme for practising accountants be put in place in place when the number compares with the developed

nations (in terms of economy, e.g. UK). This may imply that the regulatory environments, legal system as well as cultural differences may well collectively influence the size of accountants in a country consistent with Haniffa and Hudaib (2002) and Mwaura and Nyaboga (2009).

More specifically, when compared to the US and the UK, this index is lower for MENA countries. However, our interpretation falls within the context of the market histories of these countries as they do not have the long history of capital market development like the one enjoyed by the developed economies considered in the study. Thus, on this ground, we would argue that they do have the capabilities to sustain the IFRS implementation. Furthermore, these countries, including Libya, have reviewed their regulatory environment conducive to the implementation of IFRS in part or in full adoption (or adaptation) as the indices continue to improve – indicating growing demand for institutional changes.

Therefore, the enforcement mechanisms present in the company laws and stock-exchanges regulations of these countries make IFRS compliance mandatory. This is an important conditional decision that government must have to take, to ensure optimal functioning of the institutions towards IFRS adoption. The low indices (i.e. 6 and 8) for Libya relative to other countries indicate slow progress in the institutions responsible for developing accounting profession. This result lends support to El Firjini et al. (2014) who employed triangulation technique to understand development of accounting regulation in Libya and found that weak roles of institutions such as LAAA might have slowed movement towards IASs.

5.0 IFRS Status in the Selected MENA Countries

Apart from Libya, the other three MENA countries (Egypt, Jordan and UAE) have implemented IFRS in the preparation of the financial statements of listed companies. However, as shown in Table 4 below, none of these four countries enforces IFRS compliance on unlisted companies. While Egypt the evidence we obtained from the literature suggest a strong convergence of Egyptian Accounting Standards with IFRS, UAE and Jordan have opted for the full adoption of IFRS. Egypt has already embarked on the IFRS project and has adapted them in the context and need of the country. The Egyptian Accounting Standards were prepared based on the IFRS 2005 version (UNCTAD report, 2008:5). Egypt now has 35 standards equivalent to those of the IASB whereas Jordan and UAE (Dubai and Abu Dhabi) do not have any equivalent IFRS because they have opted for the full adoption (Al-Akra et al., 2009). Libya will probably have to embark on the IFRS if it plans to join the accounting

systems, standards and practices of the globe. Moreover, to further stimulate FDI and the relocation of multinational enterprises in the country, recourse to the IFRS is necessary.

Country	For All companies	For Listed companies	Auditors report on IFRS compliance
Egypt	No	Yes	Yes
Jordan	No	Yes	Yes
Libya	No	No	No
UAE:	No	No	No
Abu Dhabi	No	Yes	Yes
Dubai	No	Yes	Yes
Ajman	No	No	No
Fujaira	No	No	No
Ras al Khaima	No	No	No
Sharja	No	No	No
Umm al Qaiwain	No	No	No

Sources: IAS Plus-Deloitte (2009), IAS Plus-Deloitte (2016) UNCTAD Report (2008)

From the analysis presented in Table 4 for the selected MENA countries, auditors' reports on compliance with IFRS lend support to our conclusion about readiness of the countries based on the indices employed in this study. Interestingly, for UAE, certain markets and more business-oriented regions/hubs such as Abu Dhabi and Dubai indicate evidence of meeting IFRS requirements, a conclusion that is consistent with our findings about the institutional capacities and drive for IFRS in the areas based on the indices. There seems to be unanimous agreement of our findings with the conclusions reached in auditors reports for Egypt and Jordan (that show readiness i.e. 'Yes' result) and for Libya (that shows 'No' result) for the listed companies.

In addition, IFRS adoption may not be ideal for all market segments as the institutions need to develop to withstand such transformations. Hence, 'No' answers to IFRS adoption across all companies (listed and unlisted) even though both economic and accounting development indicators may support a need for IFRS. The institutional isomorphism describes this process that compels an organisation to behave like other organisations facing identical environmental conditions to move towards similar direction. Companies in Abu-Dhabi and Dubai must have clearly exhibited these attributes which include attracting funds from the public rather than banks as revealed by the indices.

6.0 Conclusions and Implications of the Study

This paper has investigated the level of accounting development of four MENA countries (Egypt, Jordan, Libya and UAE) based on 9 different indices we considered to be more accounting focused as against the conventional economic development indices. The study traces the expansions in regulations and different country-specific analysis to account for the current state of accounting practices in the selected countries. Albeit the limitations in available secondary data, accounting development indices were used to assess the level of development and the indices are compared with those of their key trading partners (Germany, Italy, UK and US). In addition, the reforms over the last four decades in these countries were analysed and their impact on accounting was explained alongside the accounting indices and within the framework of institutional theory.

In line with the institutional theory's assertion that organisations that share the same environments experience identical institutional pressures, this study demonstrates how the political, economic, legal and cultural institutions in the selected MENA countries shape the development of their accounting practices. Specifically, the study uses the theories to explain the motivations of the players to set what they believe is the best way to how the activities of professional accounting bodies, accounting regulators, government agencies, Arab cultures and social values constitute institutional environments that generate pressures on the countries' accounting development. The elements of institutional isomorphism help to explain the MENA countries' plight in seeking legitimacy and success through the level and pace of accounting developments in their Western trading partners as well as the activities of international accounting bodies such as IFAC. The indices reveal the need for IFRS within the states considered in this study.

The study also reveals that, when compared with their fellow trading partners, three (Egypt, Jordan and UAE) of these four countries could be placed on a level playing field given their business environment, methods of raising finance and the professional capability. These three MENA countries do have capital markets that demonstrate the feature of a strong-equity market (Nobes, 1998) despite their religious and cultural history (Boolaky, 2008). When comparing the ranks of these countries using the indices in this paper, they precede some of their fellow trading partners when it comes to whether they have a business environment conducive to the use of IFRS. Jordan is well quoted in terms of listed companies deflated per million of population and even precedes countries like the US, Germany and Italy. This is

repeated when comparing market capitalisation with population size for Jordan. UAE is also classified as an economy with a strong equity market and with a significant participation of the private sector. A glimpse at the score in index 5 suggests that UAE and Jordan are better positioned than US and UK.

Along this line, the main contributions made by this study are noted below:

Our approach, based on indices that proxy for accounting development within MENA countries, reveals some important indicators that possess the power to relate regulatory framework of these four countries in understanding and explaining IFRS adoption/adaption. Additionally, this paper has made significant contribution to the literature by providing a comprehensive review of the regulatory framework within the four MENA countries in order to understand how institutional evolution led to the current state of accounting practices. In the light of the indices/analysis provided, the literature reviewed, and the theoretical framework developed, this study produces an important framework to understanding evolution of accounting practices in the era when countries across the globe are facing a push (coercive) towards IFRS adoption.

Consequently, these findings are important in the context of evaluating whether an economy is sufficiently developed and ready to adopt or adapt the IFRS. It has important implications for FDI both by private individual investors and businesses who are concerned about transparency and safety of their investments. Complying with IFRS improves the information contents of the annual reports produced by firms in these economies. This may enhance comparisons and may facilitate further flow of investments from the surplus end of the spectrum to the needing end.

Furthermore, findings also have important implications for policy-makers and regulators both in the selected countries and globally. This is because, the study highlights some important indicators that link up with country specific cultural and institutional evolutions to explain countries' accounting development and IFRS adoption. Our approach produces better explanations why some emerging countries may consider themselves fit for IFRS adoption or adaption. When more accounting-related indices and country specific indicators were used, it showed that these countries compare well with other developed countries in which IFRS are already in use. These results should be of interest to the IASB as it continues its push for the harmonisation of international accounting standards.

Finally, it should be noted that findings in this study advertise the need for further cutting-edge research in this area as future studies could develop equally rigorous and unique social indices that could further explain the readiness of a country to adopt or adapt IFRS. This could be undertaken on more longitudinal bases involving more countries. Also, previous studies that have used only the classical indicators may be re-examined in the light of this study by incorporating some of the variables adopted in this study into the models presented by these previous studies. This will improve the validity of these studies and enhance our understanding of the factors that account for the readiness or otherwise of adopting and adapting the IFRS.

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Appendix

Table 1: List of Past Research

Year	Journals	Authors	Factors affecting accounting development and IFRS/IAS
1975	<i>International Journal of Accounting Education and Research</i>	Radebaugh, L.H	Political, Economic, Social and legal
1978	<i>International Journal of Accounting Research in Third World Accounting</i>	Briston, R Briston, R.	Economic activities, taxation, industrialisation Regional co-operation, economic and political
1982	<i>Journal of Accounting Education and Research</i>	Samuels, J.M and Oliga, J.C	Economic and socio-political factors
1983	<i>Journal of Accounting and Public Policy</i>	Belkaoui, R.A,	Economic, political and civil indicator
1985			
1986	<i>International Journal of Accounting International Journal of Accounting Education and Research</i>	Hove, M.R Taluga, J and Ndubizu, G	Colonisation Economic development
1988	<i>Abacus</i>	Gray, J	Culture
1989	<i>International Journal of Accounting Education and Research</i>	Perera, M.H.B	Culture
1992	<i>Advances in International Accounting</i>	Salter, S and Doupnik, T	Legal system
1993	<i>Research in Third World Accounting Research in Third World Accounting Research in Third World Accounting Research in Third World Accounting</i>	Hagigi, M and William, P.A Larson, R.K Berry, M and Holzer, P Chaderton, R and Taylor, P.V	Economic and other environmental factors Economic growth Types of economy (planned, free and mixed) Economic growth
1995	<i>International Journal of Accounting Journal of International Business Studies</i>	Doupnik, S and Slater, S.B Salter, S.B and Niswander, F	External environment, culture Culture
1997	<i>Managerial Auditing Journal</i>	Doost, R.K	Ethics and accounting
1998	<i>Advances in International Accounting</i>	Hassan, N.A	Socioeconomic and political environment
2000	<i>The International Journal of Accounting</i>	Chamisa, E.	Capital Market
2003	<i>The ICAI Journal of Accounting Research</i>	BooLaky, P.K	Strategy to attract FDI
2004	<i>The ICAI Journal of Applied Economics</i>	BooLaky, P.K	Accounting Development Indicators
2005	<i>The International Journal of Accounting</i>	Ding, T.J and Stolowy, H	Culture
2008	<i>Journal of Applied Accounting Research</i>	BooLaky, P.K	Economic, Political and Past History
2016	<i>Journal of Accounting in Emerging Economies,</i>	Samaha, K. and Khlif, H	<i>IFRS adoption and compliance in developing countries</i>
2017	<i>Journal of Accounting in Emerging Economies,</i>	Kolsi, M. C.	IFRS and disclosure policy

Table 2: List of Indices and Formulae

Indices	Formulae
1 <i>Number of listed companies per million of population</i>	Number of listed companies/ population size
2 <i>Growth in stock-exchange using number of listed companies</i>	Number of listed companies in year 1 less year 0 and divide by number of listed in year 0 etc (i.e. horizontal analysis of number of listed companies)
3 <i>Growth in market capitalisation</i>	Number of stocks traded in year 1 less year 0 and divide by number of stocks traded in year 0 (horizontal analysis of number of stocks traded).
4 <i>Market capitalisation per million of population</i>	Market capitalisation/population size
5 <i>Market capitalisation as a percentage of GDP</i>	Market capitalisation/GDP
6: <i>Number of accountants per million of population</i>	Number of qualified accountants/population size (per million)
7 <i>Number of accountants per listed companies</i>	Number of accountants/Number of listed companies
8 <i>Financing through bank equity</i>	<i>Innovation and sophistication Index</i> Taken from World Economic Forum
9 <i>Innovation and sophistication Index</i>	

Table 3: Accounting Regulatory Framework for the MENA countries

Country	Laws	Regulatory Bodies
Egypt	Accounting Practices Act 133/1951, Revised in 2002 Central Auditing organisation, Act 144/1988 Companies Act 159/1981 Insurance Act 1981 Bank Act 351/2003 Capital Market Act 95/1992 Ministerial Decree 503/1997	Capital Market Authority Central Bank Insurance Supervision Authority Society of Accountants
Jordan	Company law 22/1997 Securities Law 23/1997 Accounting Profession law 2003 Banking law 28/2000 Insurance supervision Act 33/1999	Accounting Profession Council Jordan Association of certified Public Accountants Jordan Securities commission High Council and auditing
Libya Accounting rules in Libya are not very developed. However, the country has shown signal to move towards international standards.	Libyan Commercial Code of 1953 The Income Tax Law No11 of 2004 Libyan Investment Law No 5 of 1997 The Accounting and Auditing Profession Law No 116 of 1973 The State Accounting Bureau 1955	The Institute of Public Control Libyan Association of Accountants and Auditors Ministry of Treasury The Central Bank of Libya
UAE Accounting rules are not very developed in the UAE and the government is making move to converge the national rules with international standards	Company Law (Effective in 1989)	Ministry of Finance Ministry of Economy Emirates Securities and Commodity Market Authority Accountant and Auditor's Association State Audit Institutions Financial Services Authority

Source: Compiled by Authors using various sources