An Empirical Investigation of International Accounting Harmony – Evidence from Egypt, Jordan and GCC Countries

Abdelmohsen M. Desoky

This paper examines the extent of accounting practices harmony with particular focus on measurement practices of listed companies in eight Arab developing countries namely Egypt, Jordan and the Gulf Co-operation Council (GCC) countries. The paper extends the previous literature in this field and provides evidence on the International Accounting Harmony (IAH) between these eight countries. The empirical study is based on a sample of 250 non-financial companies for the financial year 2010. A index was used to measure the degree of accounting harmony between countries, while the Chi-square test was employed to test the equality of the proportions of accounting measurement methods choices across the eight countries. A full harmony was found in three areas namely short-term investment valuation, investment in associates, and foreign currency translate of monetary assets and liabilities. Further a high degree of harmony was found in some areas, while a lower level of harmony was found in others. The scope of this study is limited to a sample of 250 companies from the eight countries investigated and they may not represent all of the possible listed companies in these countries. Thus, it might be better to look at companies from a wider range in a future study. This study makes a considerable contribution to our understanding of corporate accounting practices in these countries of emerging stock markets.

Keywords: Arab stock markets; International accounting harmony (IAH); International financial reporting standards (IFRS).

1. Introduction

In the light of globalisation or internationalization of financial markets, companies are no longer limited in their fund raising and investment activities

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to their home stock markets. Therefore, a growing number of companies have sought listing abroad. Accordingly, investors, individual and institutional, constantly seek around the world to direct their investments to the most efficient and productive companies provided they are able to understand and compare financial statements of these companies. On the contrary, if accounting practices differ between countries this may impose burdens on investors, resulting in investment being directed to less efficient and lower performing companies in countries where the understanding and usefulness of financial statements is greater (Saudagaran, 2009). The direct impact of the above developments on accounting is that increasingly, the products of accounting in one country are used in other various countries (Nobes and Parker, 2008) and this is why the pressure for international accounting harmony (IAH) is constantly increasing (Ding, Stolowy and Tenenhous, 2003).

IAH has contributed to greater comparability in financial reporting in both developed and developing economies (e.g: Samuels and Oliga, 1982; El-Gazzar, Finn and Jacob, 1999). In recent years, there has been a move towards regional accounting harmony as a step towards greater IAH. The reason may be that environmental aspects are less diverse within a regional boundary and, once regional accounting harmony is achieved, IAH would be much easier to accomplish (Ali, Ahmed and Henry, 2006).

This study examines the extent of harmony of accounting practices with particular focus on measurement practices of listed companies in eight developing countries. They all are Arab countries including Egypt, Jordan and GCC countries namely Bahrain, Kingdom of Saudi Arabia (KSA), Kuwait, Oman, Qatar, and the United Arab Emirates (UAE). These developing countries share the same culture, language, and all have emerging stock markets. Within this environment, they are unlikely to face serious difficulties in achieving accounting harmony among them. So far, however, no attempt has been made to empirically investigate the accounting harmony in this area of the world in general and among these countries in particular. Consequently, this study is trying to answer the following main research question: are there significant differences in the proportions of accounting measurement methods choices by listed companies across the eight countries covered in this survey as of 2010?

Countries included in this survey are also members of the International Accounting Standards Board (IASB), and hence are committed, either wholly or with minor modifications, to following the International Accounting Standards – IAS/IFRS¹ for the preparation of general purpose financial statements. However, research has shown that harmonising accounting
standards does not necessarily lead to harmonized accounting practices and comparable financial reporting (Archer, Delvaille and McLeay, 1995; Emenyonu and Gray, 1992, 1996). Supporters of the use of IAS/IFRS, especially in developing countries, have argued that developing countries are generally unable to allocate the financial and technical resources needed to develop their own high-quality accounting standards (Cairns, 1994). In this regards, it was suggested that complete comparability in financial reporting may be difficult to achieve across all countries even after adopting the IAS/IFRS (Chand and Patel 2008). Others argued that even where resources can be allocated to the development of local standards, the process may be long and drawn-out and prone to repeating the mistakes already experienced by developed countries (Larson, 1993). With the adoption of IAS/IFRS in most countries (Bahrain, Jordan, Kuwait, Oman, Qatar, and UAE); with the basis of national standards in Egypt being IAS/IFRS; and with the use of IAS/IFRS for uncovered treatments by the local accounting standards in KSA, testing the degree of IAH in these countries is an important issue.

The issue of IAH is relatively new in this area of the world. To the author's best knowledge, most of the prior studies have mainly investigated the IAH on developed countries with advanced stock markets especially members of the European Union (e.g.: van der Tas, 1988 and 1992; Emenyonu & Gray, 1992; Archer et al., 1995; Krisement, 1997; McLeay, Neal and Tollington, 1999; Canibano and Mora, 2000; Aisbitt, 2001; and Jaafar and McLeay 2007); therefore, a gap exists in literature on the IAH. In addition, the current study may be considered as the first research which includes Egypt, Jordan and all GCC countries regarding the status of IAH. In light of this, this study attempts to address this gap in literature by investigating the status of IAH of listed companies in these countries and this is what distinguished findings of the current paper from those of previous studies.

There are several reasons to adopt this research in these eight countries with emerging stock markets. There appears to be very little studies that have concentrated on IAH in developing countries in general (Ali, Ahmed and Henry, 2006) and Arab countries in particular. As a result there is an increasing need to investigate the IAH in these area of the world. To this end, this study makes a considerable contribution to our understanding of corporate accounting practices in these countries of emerging stock markets.

The measurement of IAH allows accounting regulators and standard setters to assess the success or otherwise of their work, and to identify where their efforts should be concentrated in future (Pierce and Weetman, 2000). Furthermore, the empirical part of this study may provide benefits to both
regulators and investors, particularly potential investors who are interested in investing in one or more of the countries included in the current study. For instance, Naser, Al-Khyal and Nuseibeh (2005) reported that lack of harmony is viewed as the most likely factor to prevent some investors from investing across the Gulf Cooperation Council (GCC) countries. Investments from GCC outside the GCC countries are significant and governments in these countries are trying to attract these investments and encouraging other new investments by both local and foreign investors. Furthermore, for many years, governments in both Egypt and Jordan are encouraging foreign investors to invest in the local economies. Furthermore, this study may assist in understanding other stock markets in the area, which may contribute to the accounting literature on both IAH and emerging markets.

This empirical investigation will be achieved through examining a number of accounting measurement practices such as accounting for property, plant and equipment (evaluation and depreciation); inventory valuation and costing; foreign currency translations; accounting for investment in associates; and accounting for short-term and long-term investments. Similar to most previous studies (van der Tas, 1988 and 1992; Archer et al., 1995; Krisement, 1997; Emenyonu and Adhikari, 1998; Canibano and Mora, 2000; Aisbitt, 2001; and Ali et al. 2006), the current study focuses on de facto or material harmonization, which measures corporate accounting practices as opposed to the legal requirements or accounting standards, rather than de jure or formal harmonisation. Herrmann and Thomas (1995) argued that a specific practice which was required by a professional standard does not necessarily indicate that it is practised or applied by all companies. For this reason, it was decided to focus on de facto or material harmonisation. This concern is more relevant in the context of developing countries including Arab countries with emerging stock markets where the regulatory agencies and professional bodies are not as effective as in developed countries with more advanced stock markets (Ali et al., 2006).

The remainder of the paper is organized as follows: the next section (Section 2) briefly discusses Arab capital markets and the adoption of IAS/IFRS. Section 3 discuss the concept of, and the need for, IAH and section 4 contains a literature review and hypothesis development. The research methodology is presented in section 5. Findings and discussion are presented in section 6, and a summary and conclusions are provided in the last section (section 7).
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2. Arab Capital Markets and the Adoption of IAS/IFRS

Countries have adopted IAS/IFRS as their domestic standards/or developed their local standards with very minor modification. Since 2001, almost 120 countries have required or permitted the use of IFRSs. All remaining major economies have established time lines to converge with or adopt IFRSs in the near future (IASB, 2012). Concerning the Arab world, efforts have been done to support Arab countries to adopt IAS/IFRS. For instance, in 1997, the Arab Society of Certified Accountants (ASCA), which was founded in 1984 and now a member of both the International Federation of Accountants (IFAC) and the International Accounting Standards Board (IASB), represented by 22 Arab countries, entered into an agreement to support IAS/IFRS as the national accounting standards for the member countries (Mogul, 2003).

Countries selected in this survey are roughly similar in their general environment, whether cultural, social, or linguistic. The governments in most of the surveyed countries in the last few years are more willing to increase local and regional and foreign investments in the transfer of technology and modern management techniques in the development of the private sector's own capabilities. The harmony of accounting practices is considered one of the most important steps towards achieving the above goal, it is fair to say, theoretically, that the harmony of accounting practices is possible in these countries and is expected to improve comparability and understandability of financial information. It should also facilitate rational economic decision-making for investors. In addition to those countries included in the current study, others such as Lebanon, Morocco, Palestine, Syria and Yemen also require or permit local companies to use IFRS.

Moreover, countries included in the current study are characterised by having emerging stock markets and most of them have adopted the IAS/IFRS. For instance, in Bahrain, the Bahrain Stock Exchange (BSE), was established in 1987 and officially commenced operations on June 1989. In 1993, the Ministry of Commerce and Agriculture advised the corporate sector companies to adopt the IAS/IFRS and the Commercial Companies Act (CCA) (amended in 2001) made it compulsory for all the limited liability companies to apply IAS/IFRS (Joshi et al, 2008).

In Egypt, the Egyptian Stock Exchange (EGX), formerly known as Cairo and Alexandria Stock Exchange (CASE), was established in 1883 and 1903 in Alexandria and Cairo respectively; and reached their historic peak in the 1940’s when, together, they constituted the fifth largest market in the world. However, due to the Socialist policies adopted by the government, which led
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to a wave of major nationalisation decrees that started in 1959, a major
reduction in activity occurred in the late 1960s and the early 1970s; however
the government decided to change towards a free market economy.
Consequently the government worked to encourage investments by both Arab
and foreign capital in the new projects of the country (Mecagni & Sourial,
1999). During the past two decades, Egypt made considerable efforts to align
corporate financial reporting requirements with the International Accounting
Standards (IAS). A new Capital Market Law No. 95 of 1992 was issued and Its
Executive Regulations required adherence to IAS/IFRS in 1993. Another step
of these efforts was the issuance an official Arabic translation of the IAS by the
Minister of Economy in 1997. This step led to the full adoption of IAS/IFRS
since 1997 for the first time.

In Jordan, the Amman Stock Exchange (ASE) was established in March 1999
and by the end of 2008. All companies registered under the Companies Law
22/1997 should maintain sound accounting records and present annual
audited financial statements in accordance with internationally recognized
accounting and auditing principles. Further, according to the Jordanian
Securities Commission (JSC) Law 23/1997 and Directives of disclosures,
auditing, and accounting standards (1/1998), all companies subject to JSC's
supervision are required to adopt IAS/IFRS.

The Kuwait Stock Exchange (KSE) is among the first and largest stock
exchanges in the Gulf region (KSE, 2011). All companies are required to adopt
IAS/IFRS by the Ministerial Decree No. 18 of 1990. In Oman, the Muscat
Securities Market (MSM) is the principal stock exchange of Oman. It was
founded in June 1989 by a Royal Decree No. 53 of 1988. Article 5 of Decree
No. 5/2007 issued in October 2007 by the Capital Market Authority in Oman
requires all listed companies in MSM to adopt the IFRS (CMA, 2011). The
Doha Securities Market (DSM), which was founded in 1997, is the
principal stock market of Qatar. The issuance of Law 33/2005 resulted in
transforming DSM into a shareholding company named Qatar Exchange (QE)
in June 2009. In practice, listed companies in QE adopt IAS/IFRS in preparing
their financial reports, however there is no clear stipulations to require the
adoption of IAS/IFRS as Article 146 of the Commercial Companies' Law No. 5
of 2002 requires auditors to declare in their reports whether "the company
holds accounts, records and documents systematically in accordance with the
accounting principles approved internationally".

Concerning the Kingdom of Saudi Arabia (KSA), in March 2007, the Saudi
Stock Exchange Company (Tadawul) was formed by a Council of Ministers'
Decree (Tadawul, 2011). KSA uses local accounting standards issued by the
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Saudi Organization for Certified Public Accountants (SOCPA), which was established by a Royal Decree in 1992 to oversee the accounting and auditing profession in the Kingdom, and in case an issue is not covered by the local accounting standards, IAS/IFRS are used. Furthermore, banks operating in the KSA generally used IAS/IFRS.

The UAE stock exchange is comprised from two stock exchanges, Abu Dhabi Securities Exchange (ADX) and Dubai Financial Market (DFM) which was established in the same year, 2000. Since 2003, all companies listed on both ADX and DFM are required to adopt IAS/IFRS. Further, the Central Bank of UAE required all banks working in the country to adopt IAS/IFRS. In conclusion, of the eight countries selected in this survey, seven countries have adopted the IFRS and one only country (Saudi Arabia) use them as a guide for uncovered treatments by local accounting standards. In the light of the above, the study of harmonization of accounting practices in this area of the world is much needed.

Table 1: Value traded and market capitalization of selected Arab countries: (US$ Millions)

<table>
<thead>
<tr>
<th>Stock Exchange</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
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</thead>
<tbody>
<tr>
<td>Abu Dhabi Securities</td>
<td>42,825.18</td>
<td>61,279.81</td>
<td>18,698.35</td>
<td>9,115.70</td>
<td>6,644.59</td>
</tr>
<tr>
<td>Exchange (ADX)</td>
<td>112,159.52</td>
<td>61,887.63</td>
<td>72,967.81</td>
<td>71,268.62</td>
<td>64,435.24</td>
</tr>
<tr>
<td>Amman Stock Exchange</td>
<td>17,109.59</td>
<td>27,079.04</td>
<td>13,615.91</td>
<td>9,349.25</td>
<td>3,937.78</td>
</tr>
<tr>
<td>(ASE)</td>
<td>41,298.47</td>
<td>35,984.36</td>
<td>31,985.19</td>
<td>30,995.34</td>
<td>26,998.88</td>
</tr>
<tr>
<td>Bahrain Stock Exchange</td>
<td>816.07</td>
<td>1,905.46</td>
<td>459.84</td>
<td>283.26</td>
<td>245.92</td>
</tr>
<tr>
<td>(BSE)</td>
<td>26,795.93</td>
<td>19,954.52</td>
<td>16,141.33</td>
<td>19,902.66</td>
<td>16,513.32</td>
</tr>
<tr>
<td>Beirut Stock Exchange</td>
<td>4,589.58</td>
<td>1,514.95</td>
<td>934.60</td>
<td>1,693.10</td>
<td>495.92</td>
</tr>
<tr>
<td>(Bej.SE)</td>
<td>16,093.14</td>
<td>41,298.47</td>
<td>27,079.04</td>
<td>35,984.36</td>
<td>13,615.91</td>
</tr>
<tr>
<td>Casablanca Stock</td>
<td>20,917.85</td>
<td>14,231.21</td>
<td>8,598.67</td>
<td>16,513.32</td>
<td>6,644.59</td>
</tr>
<tr>
<td>Exchange (CSE)</td>
<td>18,535.91</td>
<td>63,420.58</td>
<td>60,092.23</td>
<td>495.92</td>
<td>245.92</td>
</tr>
<tr>
<td>Doha Securities Market</td>
<td>24,738.05</td>
<td>41,249.72</td>
<td>18,282.72</td>
<td>60,692.23</td>
<td>41,249.72</td>
</tr>
<tr>
<td>(DSM)</td>
<td>95,517.99</td>
<td>76,656.74</td>
<td>87,931.99</td>
<td>123,316.64</td>
<td>164,059.84</td>
</tr>
<tr>
<td>Dubai Financial Market</td>
<td>89,904.85</td>
<td>69,879.87</td>
<td>46,659.87</td>
<td>21,589.79</td>
<td>128,439.21</td>
</tr>
<tr>
<td>(DFM)</td>
<td>138,697.83</td>
<td>65,217.73</td>
<td>58,289.91</td>
<td>36,576.80</td>
<td>49,549.32</td>
</tr>
<tr>
<td>The Egyptian Exchange</td>
<td>49,388.19</td>
<td>65,166.94</td>
<td>50,812.70</td>
<td>18,081.29</td>
<td>18,081.29</td>
</tr>
<tr>
<td>(EGX)</td>
<td>134,903.52</td>
<td>83,185.00</td>
<td>65,166.94</td>
<td>18,081.29</td>
<td>18,081.29</td>
</tr>
<tr>
<td>Kuwait Stock Market</td>
<td>120,659.30</td>
<td>116,023.17</td>
<td>74,161.61</td>
<td>42,772.42</td>
<td>20,844.91</td>
</tr>
<tr>
<td>(KSM)</td>
<td>193,513.28</td>
<td>113,527.07</td>
<td>104,226.22</td>
<td>124,919.97</td>
<td>100,927.95</td>
</tr>
<tr>
<td>Muscat Securities Market</td>
<td>4,714.61</td>
<td>8,586.32</td>
<td>5,380.32</td>
<td>3,965.40</td>
<td>2,535.17</td>
</tr>
<tr>
<td>(MSM)</td>
<td>22,767.03</td>
<td>15,643.01</td>
<td>18,508.60</td>
<td>21,712.05</td>
<td>19,697.72</td>
</tr>
<tr>
<td>Palestine Securities</td>
<td>753.65</td>
<td>1,088.60</td>
<td>697.90</td>
<td>586.83</td>
<td>346.75</td>
</tr>
<tr>
<td>Exchange (PSE)</td>
<td>2,403.96</td>
<td>2,104.57</td>
<td>3,199.74</td>
<td>3,460.80</td>
<td>2,792.47</td>
</tr>
<tr>
<td>Saudi Stock Exchange</td>
<td>628,055.57</td>
<td>483,122.89</td>
<td>322,443.10</td>
<td>192,445.39</td>
<td>286,945.15</td>
</tr>
<tr>
<td>(SSE)</td>
<td>522,721.12</td>
<td>246,809.85</td>
<td>318,784.68</td>
<td>353,419.01</td>
<td>338,791.41</td>
</tr>
<tr>
<td>Tunis Stock Exchange</td>
<td>557.42</td>
<td>1,425.38</td>
<td>1,206.26</td>
<td>1,913.30</td>
<td>1,989.22</td>
</tr>
<tr>
<td>(TSE)</td>
<td>4,992.75</td>
<td>6,381.83</td>
<td>9,399.05</td>
<td>11,750.70</td>
<td>9,647.79</td>
</tr>
<tr>
<td>Total of value traded</td>
<td>1,005,029.71</td>
<td>691,999.99</td>
<td>567,892.15</td>
<td>348,941.62</td>
<td>379,741.50</td>
</tr>
<tr>
<td>Total of market</td>
<td>1,330,404.45</td>
<td>805,561.96</td>
<td>887,234.19</td>
<td>988,462.54</td>
<td>882,960.35</td>
</tr>
</tbody>
</table>

Source: Adapted from: AMF, 2011; EGX, 2011; and MSM, 2011.
Note: Market capitalization by 31/12 of each year and in "Italic".

Most Arab countries have liberalized their economies in different extents with the aim of attracting increased local and foreign direct investment and portfolio investment. Table 1 above shows the value traded and market capitalization of
the key Arab stock markets including those selected for the survey. It shows that at the end of 2007, market capitalization of the selected eight countries represent about 96% (US$ 1,277,671.90 million) of the total market capitalization of all Arab countries (US$ 1,330,400.45 million), and at the end of 2008, it was about 89.2% (US$ 718,865.91 million) of the total market capitalization of all Arab countries (US$ 805,561.96 million).

3. The Concept of and Need for IAH

It is important to distinguish between two terms as used in the international accounting context: 'harmonization' and 'standardization'. It is believed that harmonization is a process of reducing alternative accounting choices (Nobes, 1987). It is a movement towards harmony (Canibaro and Mora, 2000). Furthermore, IAH relates to the process of reducing the contradictory accounting rules or the diversity that exists among accounting practices in order to improve the degree of comparability of financial reports prepared by companies from different countries (Choi, Frost and Gary, 2002). On the other hand, international standardisation, which is defined as a process that constrains choice and results ultimately in the adoption of the same accounting method by all firms in all countries (a universal application), implies a movement towards global uniformity (McLeay et al., 1999).

Tay and Parker (1990) argued that there has been a tendency for some authors to use the terms "harmonisation" and "standardisation" as if they were synonymous. However, the term harmonization is different from standardization. While harmonization is a process, which entails “a movement away from total diversity of practice”, standardization is a process which involves “a movement towards uniformity” (Tay and Parker, 1990).

In the light of the above, a distinction can also be drawn between two types of harmony or harmonization, namely, ‘de facto’, 'material' or accounting practice harmony and ‘de jure’, 'formal' or accounting regulation harmony (van der Tas, 1988; Tay and Parker, 1990). The first refers to the increase in the degree of comparability that results from greater conformity in practices, and the second to harmony of regulations. Formal harmony would normally lead to material harmony, but this is not necessarily the case. It may be accompanied by disharmonization if the accounting standards permit for more options for companies. At the same time, material harmony might occur without being increased by formal harmony. This will be referred to as spontaneous harmony (Canibano and Mora, 2000).
Furthermore, the harmony of financial reports or standards can refer either to the degree of disclosure or to the accounting method to be applied. Harmony of the extent of disclosure is called disclosure harmony, while, harmony of applied accounting methods is called measurement harmony. In addition to the above concept, as Archer, Delvaille and McLeay (1996, p. 2) suggested, harmony "is such that the process of harmonization will lead to a situation of maximum harmony with respect to a particular financial statement item when all companies in all countries use the same accounting method". Furthermore, some authors in the international accounting area differentiated between harmony and harmonisation. For instance, Tay and Parker (1990) defined harmony as a clustering of companies around one or a few available accounting methods, and harmonisation as a movement away from total diversity of accounting methods. Accordingly, harmony is a state of measure at a point of time, whereas harmonisation is a process measured by comparing harmony at different times (Emenyonu and Gray, 1996). For the purposes of the current paper, the focus will mainly be on the measurement harmony.

The literature shows that several benefits might also arise from the IAH among developing countries. Amongst these benefits are the elimination of misleading accounting practices; a limiting of managers' ability to distort data (Healy and Palepu 1993), and the saving of time and cost related to the preparation and interpretation of financial statements. Moreover, auditing firms in the developing countries may get some advantages from harmonised accounting standards and practices in these countries throughout expected savings on training and development of staff in these countries. The professional accounting bodies in the these countries can also benefit from harmonized accounting standards and practices through evidence of duplicated research and standard-setting efforts (Chandler, 1992).

4. Literature Review and Research Questions

In the past two decades, the accounting literature provides a large number of studies on accounting harmonisation. However, most of the previous research was carried out in developed countries especially the European Union (EU) countries using different statistical methodologies. Previous studies in accounting harmonisation falls into two main categories. First, studies related to (a) 'de facto' or 'material' harmony (accounting practice harmony) at a point of time (e.g., van der Tas, 1988, Emenyonu and Gray, 1992; Herrmann and Thomas, 1995; Emenyonu and Adhikari, 1998; Parker and Morris, 2001), and (b) 'de facto' or 'material' harmonisation (accounting practice harmonisation) through measurement of movements in harmony over a period of time (e.g.,
van der Tas, 1992; Archer et al., 1995, 1996; Krisement, 1997; McLeay et al., 1999; Canibaro and Mora, 2000; Ali et al. 1996; and Jaafar and McLeay, 2007) and second, those related to ‘de jure’ or ‘formal’ harmony (accounting regulation harmony) (e.g.: Rahman et al., 1996; and Larson & Kenny, 1999). The current study has some features of group (a) of the first category because its main objective is to measure the IAH which rely on comparing accounting measurement practices between firms in different countries, taking one or more areas of practice at a time. Such composite measures would provide an indication of the overall nature of accounting harmony in a category of information, for example, fixed assets, inventory, … etc. (Rahman et al., 2002).

According to Rahman et al. (1996), previous studies in accounting harmonisation are very much at an experimental stage, where methodology and analytical techniques are still being proposed and tested on particular samples of accounting issues and countries. Despite similarities in their purpose, they varied in their results. This is attributable to the differences in the issues selected, countries examined and the analytical techniques used. Table 2 below summarises previous studies in this field showing their objectives, measurement areas, data source, countries, methodology and main conclusions.

It is evident from the previous literature that while there have been a number of studies accomplished on the issue of accounting harmonisation in some areas of the world, especially within the European Union (EU) and the Association for South-East Asian Nations (ASEAN), Middle Eastern including most Arab countries have not been explored. The present study addresses this exclusion and may contribute to our understanding of accounting measurement and disclosure practices in this area of the world. Furthermore, research questions and the general hypothesis formulated in the current research were not answered or tested before by any of previous studies.

The review of the literature showed that although the accounting literature provides extensive evidence regarding IAH in some areas of the world, to the best of the researchers’ knowledge, no evidence is given about IAH in
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#### Table 2: Previous studies in IAH

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</tr>
</thead>
<tbody>
<tr>
<td>Objectives</td>
<td>Suggestion of new methods for harmonisation.</td>
<td>Harmonisation in each year</td>
<td>Harmony</td>
<td>Harmonisation</td>
<td>Harmony</td>
<td>Harmonisation</td>
<td>Harmonisation</td>
<td>Harmonisation</td>
<td>Suggestion of new methods for harmonisation.</td>
</tr>
<tr>
<td>Measuremnet areas</td>
<td>Deferred tax and fixed assets valuation</td>
<td>Deferred tax</td>
<td>Inventory valuation; depreciation; goodwill; R&amp;D; fixed assets valuation; extraordinary and exceptional items, Deferred tax; and goodwill</td>
<td>Deferred tax; and goodwill</td>
<td>Fixed asset valuation; depreciation; goodwill; R&amp;D; inventories valuation; Foreign currency, Deferred tax; and goodwill</td>
<td>15 measurement Practices</td>
<td>14 areas of accounting measurement and disclosure practices</td>
<td>Foreign currency.</td>
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<tr>
<td>Countries</td>
<td>Netherlands, USA and UK</td>
<td>154 companies from: Belgium, Denmark, France, Germany, Greece, Ireland, Luxembourg, Netherlands, and UK</td>
<td>78 companies from: France, Germany and UK (26 companies each).</td>
<td>89 companies from: Belgium, France, Germany, Ireland, Netherlands, Sweden, Switzerland and UK</td>
<td>217 companies from: Belgium, Denmark, France, Germany, Ireland, Netherlands, Portugal and UK</td>
<td>89 companies from: Belgium, France, Germany, Ireland, Netherlands, Sweden, Switzerland, and UK</td>
<td>Five ASEAN countries: Indonesia, Malaysia, the Philippines, Singapore and Thailand.</td>
<td>A total of 293 companies from: France, Germany, Japan, the UK and the USA (26).</td>
<td>Belgium, France, Denmark, Germany, Greece, Ireland, Luxembourg, Netherlands, and the UK</td>
</tr>
<tr>
<td>Method used</td>
<td>H index, C index, and I index</td>
<td>C index, and Chi-square</td>
<td>I index, and Chi-square</td>
<td>C index, Adjusted I index and Chi-square</td>
<td>A hierarchy of nested statistical models</td>
<td>I index, and Chi-square</td>
<td>Comparability index (heterogeneity and entropy)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Main conclusions</td>
<td>C index is an acceptable method for measuring harmonisation</td>
<td>Harmonisation increases considering the 'Notes to the accounts'</td>
<td>Relative lack of harmony. There is significant differences among the three countries in respect of all practice evaluated. Index valued low for depreciation to high for fixed asset valuation.</td>
<td>The index used, C index, is an inadequate measure. In the two area of deferred tax and goodwill, little progress in harmonisation took place between 1986/87 and 1990/91.</td>
<td>A high level of harmony was reported in some areas such as foreign currency, depreciation; inventories valuation; while a low level was reported for other areas.</td>
<td>Little progress in the period may be because of small or negative within-country comparability.</td>
<td>A relatively high level of harmonisation in some areas (e.g.: inventory, marketable securities, long term investments, consolidated financial statements, expenditures and foreign currency translation methods</td>
<td>While progress has been made in some respects, international accounting harmonisation has remained an elusive goal</td>
<td>Suggested method, entropy, is shown to be an appropriate measure of harmonisation. A special problem for this measurement results from the occurrence of multiple reporting</td>
</tr>
</tbody>
</table>

Corporate reports; ** Survey depending on data from the Federation of European Account-ants (FEE) analysed the CR from 15 countries for 1989.
## Table 2: Previous studies in IAH (continued)

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objectives</strong></td>
<td>Harmony</td>
<td>Suggestion of methodology for harmonisation.</td>
<td>Suggestion of a bootstrapping test of the C index</td>
<td>Examine the usefulness of Archer et al.’s (1995) decomposed C-index</td>
<td>The influence of US GAAP to the international harmony between other countries</td>
<td>Harmonization of accounting practices</td>
<td>Harmony prior to the switch to IFRS and the association between firm characteristics and harmonization</td>
</tr>
<tr>
<td><strong>Measurement areas</strong></td>
<td>Inventory, fixed assets, the disposal of fixed assets, short-term and long-term investments</td>
<td>Goodwill</td>
<td>Deferred tax; goodwill; leasing; and foreign currency.</td>
<td>20 areas of accounting measurement and disclosure practices</td>
<td>They tested 11 accounting measurement policies</td>
<td>They tested 18 accounting measurement policies</td>
<td>Depreciation; inventory; and goodwill.</td>
</tr>
<tr>
<td><strong>Countries</strong></td>
<td>France, Germany, Japan, the UK, and the USA</td>
<td>286 companies from: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Luxembourg, Netherlands, Spain, Sweden, Switzerland and the UK</td>
<td>85 companies from: Belgium, Denmark, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Norway, Spain, Sweden, Switzerland, and the UK</td>
<td>Nordic countries: Denmark, Finland, Norway, and Sweden</td>
<td>Australia and the UK</td>
<td>South Asian countries, Bangladesh, India, and Pakistan</td>
<td>Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Portugal, Spain, Sweden and the UK</td>
</tr>
<tr>
<td><strong>Method used</strong></td>
<td>Nested statistical models</td>
<td>C index with a bootstrapping test and Chi-square</td>
<td>Decomposed C index</td>
<td>H index</td>
<td>I index modified C index used by Archer et al. 1995</td>
<td>Statistical approaches (linear logistic Regression)</td>
<td></td>
</tr>
<tr>
<td><strong>Main conclusions</strong></td>
<td>Significant differences in the measurement of accounting for inventory, fixed assets and investments. A high degree of harmony in the disposal of fixed assets, short-term investments and long-term investments.</td>
<td>Considerable diversity amongst sample interlisted European companies was reported. They argued that this is not in itself an indication of disharmony.</td>
<td>Using a bootstrapping Procedure, found a high level of harmony during 1996–1997 within these countries. Results confirm the evidence that the process of harmonization went on in the 1990s.</td>
<td>A high level of within-country harmony and an increase in harmonization over this period were reported. However, there were also instances of deharmonization in the period.</td>
<td>While there was considerable national harmony in the two countries, there was only complete international harmony for only three policies. US listing status seemed to have no influence on measurement harmony.</td>
<td>The values of the I and C indices show a relatively higher degree of harmonization in the areas of property, plant and equipment, foreign currency translation and long-term investment, and a lower level of harmonization in other areas.</td>
<td>During the 1990s (the first moves towards IFRS), there was limited convergence in the adoption patterns of the accounting practices. Firm characteristics such as listing status and firm size are significant in explaining accounting policy choice across the EU member states.</td>
</tr>
</tbody>
</table>
this area of the world, Arab countries. In the light of the objective of this study and the
foregoing discussion, the following research questions were generated:
1- What is the degree of harmony on the accounting measurement methods choices of
listed companies from the eight countries covered in this survey (Egypt, Jordan and
GCC countries) in 2010?
2- Are there significant differences in the accounting measurement methods choices of
listed companies from the eight countries covered in this survey as of 2010?

I index will be employed to answer the first research question, while developing the
next research hypothesis, which developed and tested using the Chi-square test, will
help to answer the second research question:

\[ H_1 \] There are significant differences in the frequency of accounting measurement
method choices across the eight countries examined for the 2010 financial year. The
above alternative hypothesis is tested individually by examining the accounting
measurement practice choices of companies in these eight countries with regard to a
number of accounting measurement practices shown the next section (section 5.2).

5. Research Methodology

5.1 Sample and Data

In light of previous literature and the objectives of the current study, it was concluded
that the best source of data for the evaluation of the accounting practices of
companies is the corporate annual reports prepared and issued by the companies
themselves and authenticated by external auditors. As cited by Tay and Parker (1990)
"actual reporting practices may be assessed most accurately from annual accounts or
detailed surveys of such accounts". Therefore, the data needed for this study were
obtained from the published annual reports of sampled listed companies of the
financial year ended in December 31 of 2010. To obtain the information required,
annual reports of each company was examined thoroughly to find any indication of the
firm’s policy choice. Information relating to the particular method adopted for treating
each of the area of practice was commonly available from the section of "Notes to the
accounts" of most companies’ annual reports.

From the eight countries included, a total of 250 publicly traded non-financial
companies were selected for the empirical study. 20 companies from each of Bahrain,
Oman and Qatar; 30 companies from Jordan; 40 companies from each of Egypt,
Kuwait, KSA and UAE were randomly selected from the most active listed companies
in each country.

Selected companies are amongst those of the largest and most active companies in
each stock exchange and the selection aimed to include companies from a range of
industries and exclude those likely to have idiosyncratic financial reporting (e.g.
banking and financial services). They have been excluded, due to the specialized
financial statements prevalent in these sectors. It is not expected that industrial factors
should introduce any distortions since the sample is representative of a number of
different industrial segments. Large and most active companies were chosen because
international harmony is much more important for them because they are more likely
to attract foreign investors, to borrow or to operate abroad. In the light of the number
of listed companies in each country, the sample size chosen was intended to be large
enough to have some expectation of being representative but small enough to allow
intimate knowledge of the annual reports.
The selection of these eight countries was based on what was mentioned above in section 2. For instance, as at the end of 2010, market capitalization of the selected eight countries represent about 89.4% of the total market capitalization of all Arab countries, and was about 89.9% at the end of 2011. Consequently, based on the above argument, the eight countries selected for the empirical study were enough to represent Arab countries.

5.2 Measurement Practices and Possible Methods

For testing the main hypothesis in this study and answering the main research question, the following accounting measurement practices have been examined:
1. valuation of property, plant and equipment,
2. depreciation of property, plant and equipment,
3. inventory valuation,
4. inventory costing,
5. valuation of long-term investments,
6. valuation of short-term investments,
7. accounting for investment in associates, and
8. foreign currency translation of assets and liabilities.

The above accounting measurements have been selected because they have all been applied in most companies in the eight countries and addressed by various accounting standards adopted in these countries. Furthermore, these items have been chosen since these practices significantly affect measures of net assets and/or profits and company annual reports. A preliminary survey of financial statements of companies from the eight countries indicated that many of the topics listed above affect most companies as evidenced by the fact that a sizable number of the companies usually disclose the policies for dealing with the topics. As a result of the preliminary survey, other two accounting measurement areas namely "accounting for R&D" and "accounting for leases" were excluded from the study.

5.3 Statistical Analysis

Two different methodologies for measuring the level of harmony have been developed in the accounting literature: concentration indices and statistical models. The nonparametric Chi-square ($X^2$) was employed to test the equality of the proportions of accounting measurement methods choices across the eight countries, while I index was used to measure the degree of harmony. In the accounting literature, the first serious attempt made to measure the level of accounting harmony using concentration indices can be attributed to van der Tas (1988). In his leading research, he promoted the idea of indices and used the H-index (Hirschmann-Herfindahl), concentration measure employed by industrial economists, as a basis for deriving two other indices - the C-index and the I-index. H-index was used to measure harmony within countries; C-index was used to measure harmony within countries where there is multiple reporting; and I-index to measure harmony between countries (Aisbitt, 2001). In using these indices, the idea is that it is possible to quantify the degree of harmony and harmonisation of financial reporting (van der Tas, 1988) and the level of harmony increases when the result of the choice that companies make between alternative accounting methods becomes concentrated on one or only a limited number of methods.
In the light of the main objective of this study and following related previous studies (Emenyonu and Gray, 1992, 1996; Herrmann and Thomas, 1995; Ali et al., 2006), it was decided to use I index to measure the degree of accounting harmony that exists in the accounting measurement practices between the eight countries included in the survey. To give more detail, I index measures the extent to which the accounting measurement practices of the companies in these countries are concentrated around one or more alternatives. As proposed by van der Tas (1988), the general formula for the I index which includes a correction factor in the case of two or more countries, is as follows:

\[
I = \left[ \sum_{i=1}^{n} (f_1^i \times f_2^i \times \ldots \times f_m^i) \right]^{1/(m-1)}
\]

where:
- \(f_i^m\) = relative frequency of method I in country m
- \(m\) = number of countries
- \(n\) = number of alternative accounting methods

van der Tas (1988) argued that I index is applicable to a two country comparison, even though it is also appropriate when more than two countries are compared. However, the I index tends to be lower when more countries are compared due to a large number of fractions being multiplied. In his subsequent study, van der Tas (1992) overcomes this problem by applying the \((m-1)th\) root as a correction. Values of the I index range from 0 (indicating no harmony, with an infinite number of alternative methods all with the same frequency) to 1 (all apply the same accounting method).

Furthermore, the Chi-square \((X^2)\) test was used to ascertain whether significant differences can be said to exist in the proportions of accounting measurement methods choices across the eight countries. It tests observed patterns of usage against the hypothesis developed earlier in section 4. The Chi-square was chosen for this study since the data is nominal. According to Conover (1999), in addition to the general assumptions of the non-parametric tests, the Chi-square test assumes that the measurement scale is at least nominal. Here, the test, which was at the 5 percent level of significance, works through comparing observed frequencies against expected ones. If the difference is significant the alternative hypothesis will be accepted and the null one will be rejected, provided that the significance value resulting from the SPSS is small (i.e. less than the specified \(\alpha\) that is 0.05 in this study). According to Bryman and Cromer (2008), there is a restriction when using this test. In the case of only two categories, the number of cases expected to fall in these categories should be at least five before applying the test.

As a final note about the use of concentration indices, it should be noted that there are a number of difficulties in using concentration indices. As cited by Tay and Parker (1990), "the main problem with concentration indices is that no significance tests have been devised to indicate how trivial or significant (statistically) variations in index values are". To resolve this problem, several studies, followed by the current one, utilized the Chi-square \((X^2)\) test together with the indices used (e.g.: Emenyonu and Gray, 1992, 1996; van der Tas, 1992; Herrmann and Thomas, 1995; Canibano and Mora, 2000; Parker and Morris, 2001; and Ali et al. 2006). In addition, non-disclosure of an item is problematic in using concentration indices, as it is not always clear whether the item is applicable to the company but it has failed to disclose, or whether the item is not applicable. Where such an assumption can be made, implying that the
Desoky

item is not applicable, the company's annual reports may be considered as comparable with other companies who disclosed the item. One solution for such a problem, used in some previous studies (Ali et al., 2006) and in the current study, to simply omit the company not disclosing the item from the analysis related to such an item. Another problem, which was not found in the current research, comes as a result of using the above formula of the I index computation when used for more countries (e.g.: above two). The index can give very misleading results when all companies (100%) from some countries adopt a specific method which at the same time was not used at all by any company from the other countries.

6. Findings and Discussion

This study examined 8 accounting measurement practices (see: 5.2). The alternative methods of each accounting measurement practice are based on the preliminary survey of annual reports of companies from the eight countries and related previous studies (Herrmann and Thomas, 1995; Emenyonu and Gray, 1996; Canibano and Mora, 2000; and Ali et al. 2006). Furthermore, it should be remembered that of the eight countries selected in this survey, seven countries have adopted the IAS/IFRS and only one country (Saudi Arabia) use them as a guide for uncovered treatments by local accounting standards.

6.1 Valuation and Depreciation of Property, Plant and Equipment Practices

Table 3 (Panel A) presents results related to property, plant and equipment valuation practices. Two models of valuation, historical cost model or revalued amount model, were investigated in addition to a combination of the above two models. IAS 16 "Property, Plant and Equipment", revised in 1998 and amended in 2000, stipulated that "An entity shall choose either the cost model ... or the revaluation model ... as its accounting policy and shall apply that policy to an entire class of property, plant and equipment". It and its Egyptian counterpart (Egyptian Accounting Standard - EAS 10) stipulated that property, plant and equipment should be carried using one of two models historical cost or revalued amounts. According to the historical cost model, after recognition as an asset, an item of property, plant and equipment shall be carried at its cost less any accumulated depreciation and any accumulated impairment losses. Whereas according to the revalued amount model, after recognition as an asset, a given item of property, plant and equipment whose fair value can be measured reliably shall be carried at a revalued amount, being its fair value at the date of the revaluation less any subsequent accumulated depreciation and subsequent accumulated impairment losses.
Moreover, IAS 16 require that revaluations shall be made with enough regularity to make sure that the carrying amount does not differ significantly from that which would be determined using fair value at the end of the reporting period. It should be noted that the Saudi counterpart “Fixed assets standard”, which is not different from “Fixed assets standard – No.2” issued by GCC Accounting & Auditing Organization, does not permit Saudi companies to use such treatment.

Panel A of the table clearly shows that the historical cost model is the most popular model (246 of 249 companies representing about 98.8%) in the eight countries, while a very limited number (only 3 or about 1.2%) of companies used the revalued amount model (two companies in Bahrain) and a combination of the two models (one company in Egypt). In six of the eight countries, all companies used the first model, the historical cost. This result reveals a high level of harmony among the eight countries in relation to property, plant and equipment. The I index value of 0.9741 suggests the achievement of a high level of harmony on this topic. Further the Chi-square result, which supports the above conclusion, indicates that there are significant differences on the proportions of property, plant and equipment valuation methods choices across the eight countries. One possible reason for the above result is that the revalued amount model is still not popular in most developing countries including the eight countries investigated in the current study.

Concerning the depreciation methods, panel B of the above table presents the findings related to a number of methods of depreciation namely straight-line, declining balance, units of production and combination of some methods. According to IAS 16 and its Egyptian (EAS 10) and Saudi counterpart a variety of depreciation methods can be used to allocate the depreciable amount of an asset on a systematic basis over its useful life and the company selects the method that most closely reflects the expected pattern of consumption of the future economic benefits embodied in the asset. Panel B shows that straight-line depreciation is the most popular method used (247 of 249 companies representing about 99.2%). Of the 249 companies provided information on methods of depreciation, only two companies (0.8%) used a combination of the straight-line and the declining balance, one from each Egypt and KSA. I index shows that the harmony level very high (0.9839) and based on the Chi-square test statistics, it could be concluded that there is a significant difference in the depreciation methods chosen by companies in the eight countries.

This finding can be compared with other previous studies especially those who used the same methodology applied in the current study. For instance, the above findings...
are consistent with some previous studies such as Ali et al. (2006) who reported a relatively high value of harmony (I index = 0.7267) in relation to property, plant and equipment valuation in India, Pakistan and Bangladesh. However, they reported a low level of harmony (0.3198) for depreciation methods. Herrmann and Thomas (1995) in eight European countries revealed a low level of harmony on property, plant and equipment valuation with I index value of 0.2852, and a higher value of 0.6245 for depreciation methods and of 0.9067 when excluding Germany as one of the eight countries included in their study. Emenyonu and Gray (1996) reported a relatively low level of harmony on depreciation methods with I index of 0.3294 and 0.2295 in 1971/71 and 1991/92 respectively.

6.2 Inventory Valuation and Costing Practices

IAS 2 "Inventories" (revised 2003) and its Egyptian counterpart (EAS) require that inventories should be valued at the lower of historical cost or net realizable value (LCR). Cost should be determined on a specific identification basis for goods not ordinarily interchangeable or produced and segregated for specific projects. However, their Saudi counterpart "Inventory" requires that inventories should be valued at the lower of historical cost or market value (LCM). Accordingly, LCR, LCM, cost, and a combination of valuation methods are investigated and reported in Panel A of Table 4 to measure the level of harmony in the inventory valuation in the eight countries. From Panel A, it is clear that LCM was used predominantly practiced as an inventory valuation method in the eight countries. Of 222 companies disclosed information about inventory valuation methods, 172 companies (77.5%) used LCR valuation method, while other 37 companies (16.7) used LCM. Only 12 companies (5.4%) used a combination of two or more methods of inventory valuation. I index value refers to above average level of harmony in the eight countries with a value of 0.6761. Further, Panel A shows significant differences in the inventory valuation method choices between companies in the eight countries. A possible reason for this above average level of harmony is due to the availability of an alternative method, LCM, for the valuation of inventories in KSA.

On the other hand, IAS 2 and its Egyptian counterparts allow companies to use a number of inventory costing methods including First-in, first-out (FIFO) and weighted average (WA). They do not permit the use of the last-in, first-out (LIFO) method. Also, an entity shall use the same cost formula for all inventories having a similar nature and use of the entity. For inventories with a different nature or use, different cost formulas may be justified. The Saudi counterpart permits companies to use LIFO in addition to FIFO and WA methods. Panel B of Table 4 presents findings related to inventory costing methods. Of 250 sampled companies, 203 provided information on inventory costing methods and of them 178 companies (87.7%) used WA, 11 companies (5.4%) used FIFO, and 14 companies (6.9%) used a combination of methods. It should be noted that the LIFO method was never used by any of the 203 companies in the eight countries. The level of harmony was high as the I index = 0.8491 in the eight countries and Chi-square referred to significant differences in the inventory costing method choices between companies in the eight countries.
Table 4: Inventory valuation and costing practices

<table>
<thead>
<tr>
<th>Methods</th>
<th>Bahrain</th>
<th>Egypt</th>
<th>Jordan</th>
<th>Kuwait</th>
<th>Oman</th>
<th>Qatar</th>
<th>KSA</th>
<th>UAE</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel A:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. LCR</td>
<td>17</td>
<td>36</td>
<td>8</td>
<td>27</td>
<td>15</td>
<td>15</td>
<td>16</td>
<td>38</td>
<td>172</td>
</tr>
<tr>
<td>b. LCM</td>
<td>0</td>
<td>1</td>
<td>15</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>18</td>
<td>0</td>
<td>37</td>
</tr>
<tr>
<td>c. Cost</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>d. Combination</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>6</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>38</td>
<td>24</td>
<td>27</td>
<td>17</td>
<td>17</td>
<td>40</td>
<td>40</td>
<td>222</td>
</tr>
</tbody>
</table>

I index = 0.6761, \( \chi^2 = 96.414 \) (significant at 5% level), D.F = 3

Panel: Inventory costing:

<table>
<thead>
<tr>
<th>Methods</th>
<th>Bahrain</th>
<th>Egypt</th>
<th>Jordan</th>
<th>Kuwait</th>
<th>Oman</th>
<th>Qatar</th>
<th>KSA</th>
<th>UAE</th>
<th>Total</th>
</tr>
</thead>
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<tr>
<td>a. FIFO</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>b. LIFO</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>c. WA</td>
<td>13</td>
<td>34</td>
<td>17</td>
<td>24</td>
<td>15</td>
<td>16</td>
<td>35</td>
<td>24</td>
<td>178</td>
</tr>
<tr>
<td>d. Combination</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>37</td>
<td>22</td>
<td>25</td>
<td>16</td>
<td>16</td>
<td>39</td>
<td>32</td>
<td>203</td>
</tr>
</tbody>
</table>

I index = 0.8491, \( \chi^2 = 118.233 \) (significant at 5% level), D.F = 3

1- lower of cost / net realizable value; 2- lower of cost / market value (LCM); 3- first-in-first-out; 4- last-in-first-out; 5- weighted average

Previous studies reported varied findings in relation to inventory valuation and costing methods. For example, results of the current study are consistent with those of Herrmann and Thomas (1995) who concluded a high level of inventory valuation in the EU countries with I index of 0.7943. However, they reported a low level of harmony (only 0.2295) for inventory costing methods. Emenyonu and Gray (1996) revealed a low level of harmony with I index of 0.3853 and 0.2825 in 1971/71 and 1991/92 respectively for inventory costing. Further, Ali et al. (2006) reported a below average level of harmony with I index of 0.4317.

6.3 Valuation of Long-Term Investment Practices

According to the IAS 40 and its Egyptian counterpart EAS 34, investment property is property (land or a building - or part of a building - or both) held to earn rentals or for capital appreciation or both. Furthermore, investment property shall be recognised as an asset when, and only when it is probable that the future economic benefits that are associated with the investment property will flow to the entity; and the cost of the investment property can be measured reliably. The standards require companies to choose between two models, fair value model or the cost model when measuring the investment property. After initial recognition, an entity that chooses the fair value model shall measure all of its investment property at fair value and the fair value of investment property shall reflect market conditions at the end of the reporting period. In the current study, three methods of valuation were tested. They are cost model, fair value model, and LCM method. The table shows that 194 companies disclosed information on the valuation of long-term investment. Of the 194 companies, the majority 157 companies (80.9%) used the fair value model. In contrast, only 34 companies (17.5%) evaluated long-term investment under cost model and 3 (1.5%) companies exercised the LCM method. The I index of 0.7319 indicates, however, that there is a tendency of agreement towards use of the fair value model suggesting that a relatively high level of harmony exists among the eight countries in relation to valuation of long-term investment.
6.4 Other Accounting Measurement Practices

Table 6 below provides results related to evaluation of short-term investment, investment in associates and foreign currency translation of assets. Result related to these three areas of accounting measurement suggest a full harmony between the eight countries as the value of I index was 1 for each. Accordingly, Chi-square was not performed for the three areas of practices.

Table 6: Accounting for short-term investment, investment in associates and foreign currency translation practices

<table>
<thead>
<tr>
<th>Methods</th>
<th>Bahrain</th>
<th>Egypt</th>
<th>Jordan</th>
<th>Kuwait</th>
<th>Oman</th>
<th>Qatar</th>
<th>KSA</th>
<th>UAE</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term investments:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fair Value Method</td>
<td>17</td>
<td>35</td>
<td>29</td>
<td>38</td>
<td>16</td>
<td>29</td>
<td>28</td>
<td>36</td>
<td>228</td>
</tr>
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<td>Investment in associates:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Equity Method</td>
<td>13</td>
<td>33</td>
<td>19</td>
<td>35</td>
<td>11</td>
<td>19</td>
<td>28</td>
<td>29</td>
<td>187</td>
</tr>
<tr>
<td>Foreign currency:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Rate</td>
<td>20</td>
<td>39</td>
<td>27</td>
<td>40</td>
<td>19</td>
<td>18</td>
<td>38</td>
<td>40</td>
<td>241</td>
</tr>
</tbody>
</table>

I index = 1, Chi-Square Test was not performed because the variable is constant.

According to IAS 39 and EAS 26 and their Saudi counterpart, after initial recognition at cost, an entity shall measure short-term investments at their fair values. Three methods for the measurement of short-term investments are analysed to examine the extent of harmony among the eight countries. They are fair value, LCM on an individual basis, and LCM on a portfolio basis. Table 6 provide the results which reveal that 228 companies provided information on the evaluation of short-term investment and fair value method as the only method chosen by sampled companies in the eight countries. Thus, this finding suggests a full harmony in this area of accounting measurement practices and I index value was 1. The above finding is not consistent with some other related studies. For example Emenyonu and Gray (1996) reported a moderate level of harmony on short term investments with I index = 0.5731 and 0.7662 in 1971/71 and 1991/92 respectively. Ali et al. (2006) reported a higher level of harmony with I index of 0.7612.

Associated companies are companies over which another company exercises significant influence, but not control, by holding between 20 to 50 percent of the voting shares. The IAS 28 and its Egyptian counterpart (EAS 18) require that investments in associates over which the investor has significant influence must be accounted for using the equity method whether or not the investor also has investments in subsidiaries and prepares consolidated financial statements. According to the equity methods, the investment in an associate is initially recognised at cost and
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the carrying amount is increased or decreased to recognise the investor’s share of the profit or loss of the investee after the date of acquisition. Of the sampled companies, 187 companies provided information related to investment in associates and all of them (100%) show their compliance with the related accounting standards. Therefore, I index value was 1 suggesting a full harmony between the eight countries in relation to investment in associates.

IAS 21 “The effects of changes in foreign exchange rates” and it Egyptian (EAS 13) require that foreign currency monetary assets and liabilities should be translated at the closing rate at the balance sheet date and; non-monetary items that are measured in terms of historical cost in a foreign currency shall be translated using the exchange rate at the date of the transaction; and other non-monetary items which are measured at fair value in a foreign currency shall be translated using the exchange rates at the date when the fair value was determined. It should be noted that the Saudi accounting standard of foreign currency require the same treatment for monetary assets and liabilities. Two translation accounting methods are chosen to measure the degree of harmony on translation of monetary assets and liabilities. These include the current rate (at the date of the financial statements) method and the average rate method. Table 6 reveals that 241 companies provided information on the translation of foreign currency and all of them (100%) used the current rate method to translate their foreign currency monetary assets and liabilities. Accordingly, this finding suggests a full harmony in this area of accounting measurement practices as I index value is 1. This result almost is consistent with some other related studies. For example Ali et al. (2006) reported a high level of harmony with I index of 0.9434. Herrmann and Thomas (1995) reported a high level of harmony in this area of accounting measurement with I index of 0.9040.

In the light of the above finding and discussion, the answer to the main research questions in this study is that the degree of harmony on the accounting measurement methods choices of listed companies from the eight countries covered in this survey (Egypt, Jordan and GCC countries) in 2008 is full harmony for three areas of practices namely evaluation of short-term investments, accounting for investment in associates, and foreign currency translation of monetary assets and liabilities. Further, the answer to the same research question is a high level of harmony in relation to other areas of practices (e.g.: inventory costing; valuation and depreciation of property, plant and equipment), and lower level of harmony in relation to inventory valuation and long-term investment valuation. The results of the Chi-square test leads to rejection of the null hypothesis and acceptance of the alternative one for all of the eight areas of accounting measurement methods choices.

7. Summary and Conclusions

This study was mainly concerned with the process of IAH of financial accounting within eight Arab countries namely Bahrain, Egypt, Jordan, Kuwait, Oman, Qatar, KSA, and UAE. It extends the previous literature in this area and provides evidence on the IAH between these eight countries and examined the extent of harmony of 8 accounting measurement practices. This survey was based on a sample of 250 companies from the selected countries for the financial year 2009. To measure the level of harmony, I index was used and the nonparametric Chi-square test was employed to test the main hypothesis of this study. The values of the I index show variant degrees of harmony. The results demonstrate that there is full harmony between the eight countries selected in this study in relation to four accounting measurement methods choices.
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namely, evaluation of short-term investments, accounting for investment in associates, and foreign currency translation of monetary assets and liabilities. Additionally, a high level of harmony was found in other areas (e.g.: inventory costing; valuation and depreciation of property, plant and equipment). Conversely, an inferior level of harmony was found in relation to inventory valuation and long-term investment valuation. The results of the Chi-square test supported the above findings and suggested significant differences among the eight countries in relation to all areas of practice. One possible reason suggested for this high level of harmony and compliance with accounting standards is the increased interest in transparency and disclosure as a reaction to the increased activities in stock markets in these countries. Findings were consistent with some previous studies, while they were not for other studies. As a general conclusion, a high level of harmony, between the eight countries, in all areas of accounting measurement practices was found supporting the argument that the adoption of IAS/IFRS in developing countries improve the IAH.

This study has a number of limitations. It is important to note that the current study does not directly evaluate or benchmark compliance with IAS, rather it measures harmony in the accounting measurement practices among the eight countries selected in this investigation. The scope of this study is limited to a sample of 250 companies from the eight countries investigated and they may not represent all of the possible listed companies in these countries. Thus, it might be better to look at companies from a wider range in a future study. Another obvious limitation of this study is that of scope. The number of countries included in this survey is limited to eight. Even within the eight countries the study intends to cover just a sample of listed companies. Therefore, any attempt to generalise the findings of this study outside these countries should be made with this limitation in mind. As the current study focused on international accounting harmony by investigating financial statements of listed companies from the eight countries for the 2009 financial period, a future study of harmonisation by investigating financial statements of a serious of financial periods is needed. Future research could investigate the IAH in relation to other accounting measurement practices ignored in the current study. Unlike most previous research which concentrated on developed countries, this investigation concerned Arab countries with emerging markets, and moreover breaks new ground in investigating IAH, thus contributing to fill an important gap in the literature and it could create some knowledge on the IAH in developing countries in general and in Arab countries in particular. Therefore, it would be interesting to duplicate this study in other Arab countries.

Endnotes

1. The abbreviation of IAS/IFRS will be used in this study to mean both International Accounting Standards and International Financial Reporting Standards.
2. Previous studies can be also categorized according to other broad classifications. For instance, Rahman et al. (2002) broadly categorized previous studies into six groups (For more details, see: Rahman et al. 2002).
3. Early attempts in measuring accounting harmonization such as Nair and Frank (1981) were done using descriptive statistics and variance analysis.
4. For more details about these indices, see: Archer et al (1996); Krisement (1997); and Tay and Parker (1990).
5. I index can be computed by multiplying the relative frequency of use of a specific method across surveyed countries and then adding up the results for all alternative methods. An example to compute the index for a given measurement practice with 3 methods case through 3countries as follows:
I = (0.5 x 0.7 x 0.6 + 0.3 x 0.1 x 0.3 + 0.2 x 0.2 x 0.1)\(1/(3-1)\)

\[= 0.223^{1/2}\]

\[= .472\]

For more details about these limitations, see: Tay and Parker, 1990; Archer et al., 1995; Aisbitt, 2001.

The following example explain this hypothetical case. A case of four countries and three methods:

<table>
<thead>
<tr>
<th>country</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method 1</td>
<td>1.0</td>
<td>1.0</td>
<td>0.0</td>
<td>0.3</td>
</tr>
<tr>
<td>Method 2</td>
<td>0</td>
<td>0</td>
<td>0.7</td>
<td>0.2</td>
</tr>
<tr>
<td>Method 3</td>
<td>0</td>
<td>0</td>
<td>0.0</td>
<td>0.5</td>
</tr>
</tbody>
</table>

\[I = (1.0 x 1.0 x 0 x 0.3 + 0 x 0 x 0.3 x 0.5 + 0 x 0 x 0.7 x 0.2)^{1/(4-1)}\]

\[= 0^{1/3} = 0\]

In the above example, the I index formula of computation can lead to very misleading results as the result is 0 meaning no degree of harmony between these countries. This misleading result arises due to the fact that all the companies in some countries (countries 1 and 2) adopted method 1 which was not used at all by any company in at least one of the other countries (country 3). Here, all companies from country 3 used other methods (methods 2 and 3) which was not used at all by any of the companies from the other countries (countries 1 and 2). Accordingly, in this study whenever a situation similar to the one described in the above example occurs, no attempt will be made to compute the I index score for that particular topic or item.

References


Cairns, D 1994, ‘What is the future of mutual recognition of financial statements and is comparability really necessary?’, The European Accounting Review, 3:2, 343-352.


Chand, P and Patel, C 2008,’ Convergence and harmonization of accounting standards in the South Pacific region’, Advances in Accounting, incorporating Advances in International Accounting, 24, 83–92.

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International Accounting Standards Board - IASB 2012, Various Web pages. Available at: http://www.iasb.co.uk/
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