

**MEASUREMENT OF INTERNATIONAL ACCOUNTING**

**HARMONY - EVIDENCE FROM ARAB COUNTRIES**

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## ملخص البحث باللغة العربية

قياس التوافق المحاسبي الدولي - أدلة من الدول العربية

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مدرس المحاسبة بكلية التجارة

جامعة جنوب الوادي

اهتم كثير من الدراسات المحاسبية المنجزة في العقدين الأخيرين بموضوع التوافق المحاسبي الدولي، إلا أن غالب تلك الدراسات قد اتخذت من الدول المتقدمة، لاسيما دول الاتحاد الأوربي ميداناً للبحث، في حين حرمت الدول النامية عموماً، والدول العربية خصوصاً من دراسات وتطبيقات مماثلة.

وسدا لهذا القصور تهتم دراستنا الماثلة بتقييم التوافق المحاسبي الدولي في ثمان من الدول العربية (الأردن، الإمارات العربية المتحدة، البحرين، الكويت، المملكة العربية السعودية، جمهورية مصر العربية، سلطنة عمان، وأخيراً قطر)، وهي بذلك تعتبر امتداداً للدراسات السابقة في هذا المجال، وإضافة لها في آن واحد، حيث تهتم بقياس درجة التوافق المحاسبي بين الدول المذكورة في تسع من مجالات الاختيار بين البدائل المحاسبية. وفي سبيل تحقيق هدف الدراسة، تم تقسيمها إلى عدة أجزاء رئيسية. أولاً: مقدمة تستعرض مشكلة الدراسة، وتحدد أهدافها وأهميتها؛ ثانياً: أسواق المال العربية ومدى تطبيق معايير المحاسبة الدولية؛ ثالثاً: مفهوم التوافق المحاسبي الدولي؛ والحاجة إليه. رابعاً: الدراسات السابقة؛ خامساً: منهجية البحث؛ سادساً: نتائج الدراسة الميدانية؛ وأخيراً: الخلاصة وتشمل النتائج، حدود الدراسة، والاقتراحات بدراسات مستقبلية.

وقد بنيت الدراسة الميدانية، علي عينة مكونة من ١٣٠ شركة من الشركات المسجلة في الأسواق المالية بتلك الدول الثمان، حيث تمت دراسة القوائم المالية لتلك الشركات عن العام المالي ٢٠٠٨. وللإجابة عن التساؤل الرئيسي لتلك الدراسة تم استخدام



المقياس I (I index) والذي سبق لبعض دراسات التوافق المحاسبي استخدامه لقياس مستوى التوافق المحاسبي الدولي بين مجموعة من الدول. كما استخدم الاختبار الإحصائي غير المعلمي "كا<sup>2</sup>" لاختبار فرض الدراسة الرئيسي وذلك باستخدام الحزمة الإحصائية SPSS.

وقد خلصت الدراسة إلي وجود درجة عالية من التوافق المحاسبي بين تلك الدول الثمان في معظم مجالات التطبيق المحاسبي التي تناولتها الدراسة الميدانية، ولكن بدرجات متفاوتة. حيث كانت قيمة المقياس I واحد صحيح بما يعني توافق تام بين تلك الدول ، في أربع مجالات محاسبية ، هي : المحاسبة عن شهرة المحل، تقييم الاستثمارات قصيرة الأجل، الاستثمار في شركات شقيقة، وترجمة القوائم المالية. ، كما أوضحت النتائج وجود مستوى توافق مرتفع في مجالي تحديد تكلفة المخزون وتقييم الأصول الثابتة، بينما أظهرت توافقاً أقل في المجالات الأخرى، لاسيما: تقييم المخزون، تقييم الاستثمارات طويلة الأجل. ومن ناحية أخرى فإن نتائج اختبار "كا<sup>2</sup>" قد دعمت وأكدت النتائج السابقة. وبصفة عامة يمكن القول بأن تطبيق معايير المحاسبة الدولية في معظم تلك الدول (الأردن، الإمارات العربية المتحدة، البحرين، الكويت، سلطنة عمان، وأخيراً قطر) أو الاعتماد عليها في بناء المعايير المحاسبية المحلية (جمهورية مصر العربية) قد أدى إلي ارتفاع مستوى التوافق المحاسبي بين تلك الدول.

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# MEASUREMENT OF INTERNATIONAL ACCOUNTING HARMONY - EVIDENCE FROM ARAB COUNTRIES

**Abdelmohsen M. Desoky\***

## **Abstract**

This paper is primarily concerned with the process of international accounting harmony (IAH) of financial accounting within some Arab countries namely Bahrain, Egypt, Jordan, Kuwait, Oman, Qatar, Kingdom of Saudi Arabia, and United Arab Emirates. The paper extends the previous literature in this field and provides evidence on the IAH among these countries and examines the extent of harmony of some selected accounting measurement practices. The empirical study is based on a sample of 130 non-financial companies from the eight countries for the financial year 2008. I index was used to measure the degree of harmony among countries, while the Chi-square test was employed to test the equality of the proportions of accounting measurement methods choices across the eight countries. The values of the I index show variant degrees of harmony. A full harmony was found in four areas namely goodwill, short-term investment valuation, investment in associates, and foreign currency translation of monetary assets and liabilities. Further a high degree of harmony was found in other three areas (e.g.: inventory costing; valuation and depreciation of property, plant and equipment). However, a lower level of harmony was found in relation to inventory valuation and long-term investment valuation. The results of the Chi-square test support the above findings. In general, the results revealed a high degree of harmony among the eight countries in all areas of accounting measurement practices and suggested a high



compliance by companies in those countries with the accounting standards mandated requirements. This supports the argument that the adoption of the international accounting standards improves the IAH.

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

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## **1. Introduction and statement of the problem:**

The last two decades have seen fast development in the international financial markets. In the light of globalization or internationalization of financial markets, companies are no longer limited in their fund raising and investment activities to their home stock markets. Therefore, a growing number of companies have sought listing abroad. Correspondingly, 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. Conversely, if accounting practices differ among 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 Tenenhaus, 2003).



In general, the main purpose of IAH is to narrow the differences within accounting practices that exist among countries. IAH improves the comparability of financial statements of various countries, consequently making them more useful for various users including investors. A number of studies have reported that IAH have contributed to greater comparability in financial reporting in both developed and emerging 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).

The purpose of the current study is to examine the extent of harmony of accounting practices with particular focus on measurement practices of listed companies in eight Arab countries namely Bahrain, Egypt, Jordan, Kuwait, Oman, Qatar, Kingdom of Saudi Arabia (KSA) and the United Arab Emirates (UAE). These countries share the same culture, language, religion, and all have emerging stock markets. Within this environment, they are unlikely to face serious difficulties in achieving accounting harmonization 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. Accordingly, the current 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 (Bahrain, Egypt, Jordan, Kuwait, Oman, Qatar, KSA and UAE) as of 2008?

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 – IASs<sup>1</sup> (now known as the International Financial Reporting Standards – IFRS) for the preparation of general purpose financial statements. However,



research has shown that harmonizing 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 nations (Larson, 1993). Further, it was argued that by the adoption of the IAS/IFRS, developing countries will gain early access to the benefits associated with high-quality financial reporting including more efficient stock markets, easier and cheaper access to international capital and eventually help in improving the local economies (Hoyle, Schaefer, & Doupnik, 1998).

With the exception of Egypt and Jordan, countries included in the study are members in the Gulf Cooperation Council (GCC) established for the purpose of achieving economic integration among the member states; and the Gulf Cooperation Council Accounting and Auditing Organization (GCCAAO). One of the main objectives of the GCCAAO is to develop and harmonize accounting practices and audit procedures among the six GCC countries. In spite of attempts to secure IAH, significant variations in accounting rules and practice may continue to arise among these countries. This gives a special importance to the current study. 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.



There are several reasons to adopt this research in these eight Arab countries with emerging stock markets. For example, most of the prior studies in the field of IAH have mainly concentrated 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). 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 current study will also provide an insight into the effectiveness of local and national accounting bodies in these countries in fostering coordination and improvement in financial reporting within the region.

In general, 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, this study makes a general contribution in its area and the empirical part 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 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.

The empirical investigation of the extent of IAH 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; accounting for goodwill; 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<sup>2</sup>, which measures corporate accounting practices as opposed to the legal requirements or accounting standards, rather than *de jure* or formal harmonization. Herrmann & 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 harmonization. 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. 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).

## **2. Arab capital markets and the adoption of IAS/IFRS:**

Over the last few years there has been a considerable increase in the acceptance of the IAS/IFRS in many developed or developing countries around the world. The adoption of IAS/IFRS standards



continues to take place at a different rate across the world. Even though numerous countries are adopting IAS/IFRS, the approaches used for convergence continue to differ considerably across countries. Similarly, there is considerable variation in the enforcement of accounting standards across countries. The differences in both the adoption and the enforcement of these standards are of concern to local and international accounting standard setters, regulators, auditors and financial statement users (Hope, 2003).

Countries have adopted IAS/IFRS as their domestic standards/or developed their local standards with very minor modification. IAS/IFRSs are wholly adopted or used as a base for the local accounting standards in more than 117 countries and this figure is expected to increase to about 150 countries in the next few years (IASB, 2008). Regarding reasons for this worldwide acceptance of the IAS/IFRS, Choi, Frost, and Meek (1999) reported four main reasons as follow: IAS/IFRS constitute the basis for national accounting requirements; they can be used as an international benchmark; several stock exchanges (London, Frankfurt, Hong Kong, Rome) and regulators accept financial statements that have been prepared in accordance with IAS/IFRS; and finally the EU and other supranational bodies recognize their importance. For instance, the main international financial institutions, the World Bank (WB) and International Monetary Fund (IMF), exert pressures on most developing and transitional countries to adopt IAS/IFRS as one step of their reform programmes (Mir and Rahaman, 2005). They argue that the application and implementation of internationally accepted accounting standards is necessary to command the confidence of investors.

In Germany, based on a survey sent to DAX-30 company executives, it was reported that implementing IFRS improves the comparability of financial statements of German companies (Jermakowicz, Prather-Kinsey and Wulf, 2007). Furthermore, the big 4 international auditing firms have a very influential role in the adoption of accounting and auditing rules in most countries in the



area. However, there remains evidence of significant non-compliance (Street and Gray, 2001) and the relevance of IAS/IFRS to developing and transitional countries has been questioned by a large body of the literature (e.g. Solas, 1994; Street and Gray, 2001; Chand and Patel, 2008). For instance, Solas (1994), who examined the extent of financial information disclosure by Jordanian companies according to the requirements of IAS/IFRS, concluded that disclosure was not at an acceptable level. Furthermore, in a world sample of companies, Street and Gray (2001) found a significant extent of non-compliance with IAS/IFRS. Chand and Patel (2008) concluded that complete comparability in financial reporting may be difficult to achieve across all countries even after adopting the IAS/IFRSs.

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). Other efforts were done in the area to develop the accounting profession and the concept of transparency in the financial reporting has been considered as a main concern by most institutions engaged in accounting development in the area. For example, to help in developing accounting and auditing professions in the Arab world to the highest international professional levels, ASCA has translated IAS/IFRS to Arabic language.

Countries selected in this survey are roughly similar in their general environment, whether cultural, social, or linguistic. The governments in 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. The harmony of accounting practices among these countries 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 IAS/IFRS. For example, in Syria, by a Prim Ministerial decree No. 3943, local companies desiring to list on its emerging stock exchange are required to use IAS/IFRS and since 2006 local financial institutions have been required to adopt the IAS/IFRS. In Lebanon, IAS/IFRS have been adopted since 1996 by listed companies and other financial institutions in the country (CIPE, 2003).

Moreover, countries included in the current study are characterized 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. It has grown significantly in the number of listed securities with 49 companies by November 2009 with market capitalization of about US\$15.61 billion (BSE, 2009). 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 in the preparation of their financial statements and to get their books audited (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 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, in 1974, 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). By early 2008, market capitalization increased to reach about US\$ 162 Billion and the number of listed companies was 426 (CASE, 2008). 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 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<sup>3</sup> for the first time.

In Jordan, the Amman Stock Exchange (ASE) was established in March 1999 and by the end of 2008, the market capitalization for listed shares reached about US\$ 35.4 billion, and the number of listed companies was 262 (JSC, 1999). 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/IFES.

The Kuwait Stock Exchange (KSE) is among the first and largest stock exchanges in the Gulf region with a total of 217 listed companies by mid 2009 (KSE, 2009). There is not mandatory accounting system required in Kuwait. However, all companies are required to adopt IAS/IFRS by the Ministerial Decree No. 18 of 1990. In Oman, the Muscat Securities Market (MSM) was founded in June 1989 by a Royal Decree No. 53 of 1988. By mid 2009, the number of listed companies in MSM is 132. 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 IAS/IFRS (CMA, 2009). The Doha Securities Market (DSM) was founded in 1997. The issuance of Law 33/2005 resulted in transforming DSM into a shareholding company named Qatar Exchange (QE) in June 2009. By end of 2008, there was 43 listed companies with market capitalization of US\$ 74.7 billion. 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 KSA, joint stock companies had their beginnings in the mid 1930's, and by 1975 there were about 14 public companies (Tadawul, 2009). The rapid economic expansion and the nationalization of part of the foreign banks in the 1970's led to the establishment of a number of large corporations. By that time, the stock market remained informal until the early 1980's when the government embarked on forming a regulated stock market. Lastly in March 2007, the Saudi Stock Exchange Company (Tadawul) was formed by a Council of Ministers' Decree and by mid of 2009, there was 134 listed companies with market capitalization of US\$ 287.5 billion (Tadawul, 2009). KSA uses local accounting standards issued by the 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. By the end of September 2009, companies in ADX and DFM were 67 and 65 with a market capitalization of about US\$ 90.5 billion (ADX,



2009) and 66.48 billion (DFM, 2009) respectively. 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 Middle East countries is much needed. It is clear that harmony of accounting practices will lead to greater comparability of financial statements prepared by listed companies in these countries. This provides significant assistance for international investors by generating greater confidence in investing in these countries.

Most Arab countries have liberalized their economies in different extents. The total market capitalization of the stock exchanges in Arab countries was about US\$ 1,330 billion as end of the financial year 2007, increasing by 52.5% from the previous year 2006 (US\$ 872 billion). The number of listed companies reaches 1542 companies by end of 2008 against 1550 companies by the end of 2007 (MSM, 2009). However, this market capitalization is considered very low representing only 1.7% of total market capitalization of the world stock exchanges. The following table shows the value traded and market capitalization of the key Arab stock markets including those selected for the survey.

Table 1 below shows that at the end of 2007, market capitalization of the selected eight countries represent about 97% (US\$ 1,288,374.69 million) of the total market capitalization of all Arab countries (US\$ 1,330,400.45 million), and at the end of 2008 and 2009, it was about 89.2% and 89.7% of the total market capitalization of all Arab countries. Further, Figure 1 below shows market capitalization of Arab stock exchanges by end of 2009.



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

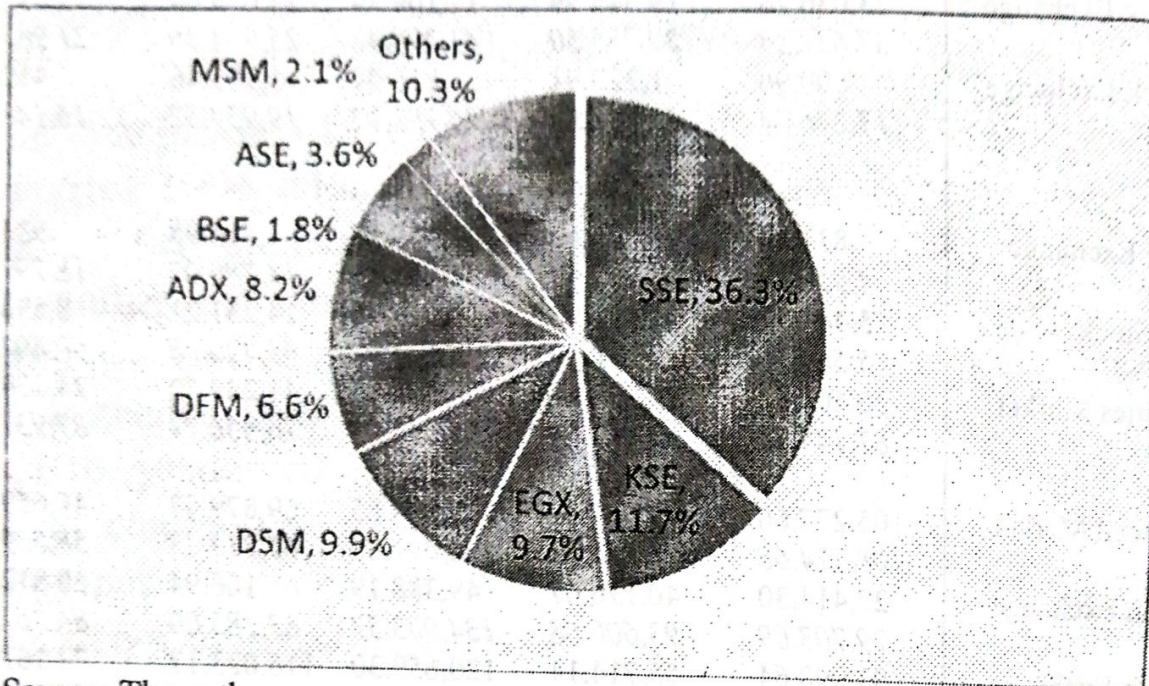
<i>Stock Exchange</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>
Abu Dhabi Securities Exchange (ADX)	26,691.37	17,907.82	42,825.18	61,279.81	18,698.35
Amman Stock Exchange (ASE)	<i>125,646.08</i>	<i>71,688.79</i>	<i>112,159.52</i>	<i>61,887.63</i>	<i>72,967.81</i>
Bahrain Stock Exchange (BSE)	23,036.78	19,543.99	17,109.39	27,079.04	13,615.91
	37,631.23	29,785.50	41,298.47	35,984.36	31,985.19
Beirut Stock Exchange (Bei.SE)	600.96	1,228.91	816.07	1,905.46	459.84
	17,276.34	21,122.84	26,795.93	19,954.52	16,141.33
Casablanca Stock Exchange (CSE)	831.46	1,745.63	4,589.58	1,514.95	934.60
	4,917.18	8,303.64	16,093.14	14,789.07	18,297.99
Doha Securities Market (DSM)	5,442.78	8,569.92	20,917.85	14,231.21	8,598.67
	5,569.90	11,894.37	18,535.91	63,420.58	60,694.46
Dubai Financial Market (DFM)	25,407.03	20,334.48	24,738.05	41,249.72	24,234.02
	87,140.94	60,913.09	95,517.99	76,656.74	87,931.99
The Egyptian Exchange (EGX)	105,277.66	93,657.37	89,904.85	69,879.87	46,659.87
	108,774.68	86,871.72	138,697.83	65,217.73	58,829.91
Kuwait Stock Exchange (KSE)	22,414.30	40,176.07	49,388.19	65,166.94	50,812.70
	79,703.09	93,600.68	134,903.52	83,185.00	86,267.22
Muscat Securities Market (MSM)	93,990.64	55,714.14	120,659.30	116,023.17	74,161.61
	139,486.14	141,923.18	193,513.28	113,527.07	104,226.22
Palestine Securities Exchange (PSE)	2,999.96	2,073.74	4,714.61	8,033.62	5,380.32
	10,928.07	13,036.98	22,767.03	15,643.01	18,508.60
Saudi Stock Exchange (SSE)	1,994.47	930.55	753.65	1,088.60	697.90
	3,751.59	2,712.14	2,403.96	2,104.57	3,199.74
Tunis Stock Exchange (TSE)	968,216.79	1,331,782.9	628,055.57	483,122.22	322,432.10
	647,502.66	326,364.47	522,721.12	246,809.85	318,784.68
<b>Total of value traded</b>	<b>1,277,369.89</b>	<b>1,594,152.59</b>	<b>1,005,029.70</b>	<b>891,999.98</b>	<b>567,892.15</b>
<b>Total of m. capitalization</b>	<b>1,271,163.68</b>	<b>872,437.71</b>	<b>1,330,400.45</b>	<b>805,561.96</b>	<b>887,234.19</b>

Source: Adapted from: AMF, 2009; EGX, 2009; JSC, 2009; and MSM, 2009.

Note: Market capitalization by 31/12 of each year and in "Italic".



Figure 1: Market capitalization of Arab stock exchanges by end of 2009



Source: The author

Note: The full name of each stock market is provided in Table 1 above.

### 3. The concept of and need for IAH:

At this stage of the paper, 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). 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).

Comparability which related to harmony is defined by FASB as follows: "The quality of information that enables users to identify similarities in and differences between two sets of economic phenomena" (FASB, 1999, SFAC No. 2, p. 33). It can be achieved



only when the same economic transactions and events are treated in the same way, using the same methods. Five types of comparability can be identified: (1) interperiod comparability, which refers to comparison of financial information of one enterprise; (2) intercompany comparability, which relates to enterprises within the same industry; (3) interline comparability, which refers to the comparison on one financial report; (4) intraline comparability, which means that the aggregation of some items to be presented as one item or number should be comparable; and (5) comparability related to the length of financial reports (Staubus, 1977).

Tay and Parker (1990) argued that there has been a tendency for some authors to use the terms "harmonization" 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). Harmonization therefore can be seen as any point between total diversity of accounting practice and rigid uniformity (Emenyonu, 1993).

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 (Canebano and More 2000).

Furthermore, the accounting harmony 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, 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". Moreover, some authors in the international accounting area differentiated between harmony and harmonization. For instance, Tay and Parker (1990) defined harmony as a clustering of companies around one or a few available accounting methods, and harmonization as a movement away from total diversity of accounting methods. Accordingly, harmony is a state of measure at a point of time, whereas harmonization is a process measured by comparing harmony at different times (Emenyonu and Gray, 1996). Canebano and More (2000) argued that although many authors in the international accounting literature say they have measured the 'level of harmonization', some of them do not compare two periods of time and, accordingly, they are actually measuring the 'level of harmony' at that date. For the purposes of the current paper, the focus will mainly be on the measurement harmony.

In general, the main purpose of IAH is to narrow the differences within accounting standards, procedures and practices that exist among countries. As mentioned above, this is expected to improve comparability of financial reports of companies in these countries. In this regard Turner (1983, p. 581) argued that:

*"the greatest benefit that would flow from harmonisation would be the comparability of international financial information. Such comparability would eliminate the current misunderstandings about the reliability of "foreign" financial statements and would remove one of the most important impediments to the flow of international investment."*

According to Cairns (1994), international capital markets need financial statements that can be readily understood and compared irrespective of the country of origin of the companies concerned. Investors and their advisers, the financial analysts, desire financial information that are comparable from country to country so that they



can compare the financial reports of companies in New York, London, Tokyo, Toronto, Copenhagen, Frankfurt, Paris, Rome and so on. Instead, they are often confused and even overwhelmed by the diversity of different national reporting requirements. Therefore usefulness of financial information to decision makers might be increased as well as facilitating rational economic decisions. The idea of IAH becomes more significant when considered against the revolution in information technology, the fast growing stock markets and their globalization.

Emenyonu (1993) highlighted three key factors which motivate the persistence of increasing efforts at international harmony of accounting. The factors are as follows: (1) the development and globalisation of capital markets; (2) the increase in the activities of Multinational Corporations; and (3) the activities of international accounting standard setting organisations. In international capital markets, IAH is expected to assist individual and institutional investors worldwide to understand the various investment environments and to compare financial statements of various companies from various countries. This is very important for the current study especially that the governments in the surveyed countries have attempted to attract various investors to invest in there emerging stock markets.

Regarding developing countries, the literature shows that several benefits might also arise from the IAH among these 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 harmonized 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:

The review of the literature can facilitate in formulating research questions and/or hypotheses and establishing a relevant methodology to achieve a research. In the past two decades, the accounting literature provides a large number of studies on accounting harmonization. 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 harmonization falls into two main categories<sup>4</sup>. 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' harmonization (accounting practice harmonization) 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). For example, Larson & Kenny (1999) examined harmonization over the period 1991 to 1995 and sought to determine whether harmonization increased during a period of greater acceptance of IAS by global stock exchanges. They reported "a discernable trend toward IAS through 1993" (Larson & Kenny, 1999, p.9). 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 among 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 harmonization 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 summarizes 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 harmonization in some areas of the world (especially within the European Union (EU), Middle Eastern, including Arab countries, have not been explored and to the best of the researcher's knowledge, no evidence is given about IAH in this area of the world, Arab countries. The present study may contribute to our understanding of accounting measurement and disclosure practices in this area of the world. 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 (Bahrain, Egypt, Jordan, Kuwait, Oman, Qatar, KSA, and the UAE) in 2008?
- 2- Are there significant differences in the accounting measurement methods choices of listed companies from the eight countries covered in this survey as of 2008?



Table 2: Previous studies in IAH

Study, year	van der Tas, 1988	van der Tas, 1992	Emenyonu and Gray, 1992	Archer et al., 1995	Herrmann and Thomas, 1995	Archer et al., 1996	Diga, 1996	Emenyonu and Gray, 1996	Krisement, 1997
Objectives	Suggestion of new methodology for harmonization.	Harmonization in each year	Harmony	Harmonization	Harmony	Harmonization	Harmonization	Harmonization	Suggestion of new methodology for harmonization.
Measurement areas	Deferred tax; assets valuation	Deferred tax	Inventory valuation; depreciation; goodwill; R&D; fixed assets valuation; extraordinary and exceptional items.	Deferred tax, and goodwill	Fixed asset valuation; depreciation; goodwill; R&D; inventories valuation; foreign currency.	Deferred tax, and goodwill	15 measurement practices	14 areas of accounting measurement and disclosure practices	Foreign currency.
Data source, year	CR, 1978-84	CR, 1978-88	CR, 1989	CR, 1986/87 and 1990/92	CR, 1992-93	CR, 1986/87 and 1990/91		CR, 1971/72 and 1991/92	CR from 15 countries for 1989*
Countries	Netherlands, USA and UK	154 companies from: Belgium, Denmark, France, Germany, Greece, Ireland, Luxembourg, Netherlands, and UK	78 companies from: France, Germany and UK (26 companies each).	89 companies from: Belgium, France, Germany, Ireland, Netherlands, Sweden, Switzerland and UK	217 companies from: Belgium, Denmark, France, Germany, Ireland, Netherlands, Portugal and UK	89 companies from: Belgium, France, Germany, Ireland, Netherlands, Sweden, Switzerland, and UK	Five ASEAN countries: Indonesia, Malaysia, the Philippines, Singapore and Thailand.	A total of 293 companies from: France, Germany, Japan, the UK and the USA (26).	Belgium, France, Denmark, Germany, Greece, Ireland, Luxembourg, Netherlands, and the UK
Method used	H index, C index, and I index	C index, and Chi-square	I index, and Chi-square	C index	I index, Adjusted I index and Chi-square	A hierarchy of nested statistical models		I index, and Chi-square	Comparability index (heterogeneity and entropy)
Main conclusions	C index is an acceptable method for measuring harmonization	Harmonization increases considering the 'Notes to the accounts'	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.	The index used, C index, is an inadequate measure. In the two areas of deferred tax and goodwill, little progress in harmonization took place between 1986/87 and 1990/91.	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.	Little progress in the period may be because of small or negative within-country comparability.	A relatively high level of harmonization in some areas (e.g. inventory, marketable securities, long term investments, consolidated financial statements, expenditures and foreign currency translation methods	While progress has been made in some respects, international accounting harmonization has remained an elusive goal	Suggested method, entropy, is shown to be an appropriate measure of harmonization. A special problem for this measurement results from the occurrence of multiple reporting

Corporate reports; \*\* Survey depending on data from the Federation of European Accountants (FEE) analysed the CR from 15 countries for 1989.



Table 2: Previous studies in IAH (continued)

Study, year	Emenyonu and Adhikari, 1998	Mcleay et al., 1999	Cambano and Mora, 2000	Aisbitt, 2001	Parker and Morris, 2001	Ali et al., 2006	Jaafar and McLeay, 2007
Objectives	Harmony	Suggestion of methodology for harmonization.	Suggestion of a bootstrapping test of the C index	Examine the usefulness of Archer et al.'s (1995) decomposed C-index	The influence of US GAAP to the international harmony among other countries	Harmonization of accounting practices	Harmony prior to the switch to IFRS and the association between firm characteristics and harmonization
Measurement areas	Inventory, fixed assets, the disposal of fixed assets, short-term and long-term investments	Goodwill	Deferred tax, goodwill, leasing, and foreign currency.	20 areas of accounting measurement and disclosure practices	They tested 11 accounting measurement policies	They tested 18 accounting measurement policies	Depreciation, inventory, and goodwill.
Data source, year	CR, 1987 to 1993	CR, 1991/92 to 1996/97	CR, 1981/82 to 1998	CR, 1993	CR of 566 non-financial companies for the financial year 1997-98	CR of 566 non-financial companies for the financial year 1997-98	Survey depending on the 2000 Reuters Surveys of quoted companies in continental Europe and the UK.
Countries	France, Germany, Japan, the UK, and the USA	286 companies from: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Luxembourg, Netherlands, Spain, Sweden, Switzerland and the UK	85 companies from: Belgium, Denmark, France, Germany, Ireland, Italy, Luxembourg, Norway, Spain, Sweden, Switzerland, and the UK	Nordic countries: Denmark, Finland, Norway, and Sweden	Australia and the UK	South Asian countries, Bangladesh, India, and Pakistan	Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Netherlands, Portugal, Spain, Sweden and the UK
Method used	Nested statistical models	C index with a bootstrapping test and Chi-square	Decomposed C index	H index C index Chi-square	I index modified C index used by Archer et al. 1995	Statistical approaches (linear logistic Regression)	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.
Main conclusions	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.	Considerable diversity amongst sample interlisted European companies was reported. They argued that this is not in itself an indication of disharmony.	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.	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.	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.	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	



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

$H_1$  There are significant differences in the frequency of accounting measurement methods choices across the eight Arab countries examined for the 2008 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 the companies listed on Appendix 1. Annual reports of the financial year ended in December 31 of 2008 were obtained from a number of sources including; (1) the company itself or its web site, (2) specialized web sites that provide a full version of financial statements in PDF format for most listed companies in the eight countries included in the study (e.g.: [www.mubasher.net](http://www.mubasher.net); [www.argaam.com](http://www.argaam.com); and [www.gulfbase.com](http://www.gulfbase.com)), (3) stock exchanges of countries included in the study were contacted or their web sites were visited to obtain non available annual reports through the company's web sites or the specialized web sites. 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 130 publicly traded non-financial companies were selected for the empirical study. Companies were randomly selected from the most active listed companies in each country. Twenty companies were randomly selected from each country including



Egypt, Kuwait, KSA, and UAE (10 companies from each of Abu-Dhabi stock exchanges and Dubai financial market) for the inclusion in the study. Fifteen companies were selected from Jordan and Qatar, and last, ten companies were selected from the last two countries (Bahrain and Oman). Table 3 below shows the number of selected companies from each country.

Selected companies are amongst those of the largest and most active companies in each stock exchange. Banking and financial services companies 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.

**Table 3: The number of companies selected from each country:**

Country	Number of companies
Bahrain	10
Egypt	20
Jordan	15
Kuwait	20
Oman	10
Qatar	15
KSA	20
UAE	20
Total	130

It was suggested that all Arab countries (22 countries) were too many given the time and other resource constraints involved. Therefore, only eight countries were selected for the empirical study. The selection of these eight countries was based on what was mentioned above in section 2 as market capitalization of the selected eight countries represent about 97%, 89.2% and 89.7% of the total market capitalization of all Arab countries at the end of 2007, 2008 and 2009 respectively. 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 goodwill,
8. accounting for investment in associates, and
9. 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)<sup>5</sup>. 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 among countries (Aisbitt, 2001)<sup>6</sup>. In using these indices, the idea is that it is possible to quantify the degree of harmony and harmonization of financial reporting (van der Tas, 1988) and the level of harmony increases when the result of the choice that companies make among 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 among 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<sup>7</sup>:

$$I = \left[ \sum_{i=1}^n (f^1_i \times f^2_i \times \dots \times f^m_i) \right]^{1/(m-1)}$$

where:

$f_i$  = relative frequency of method I in country m

m = number of countries

n = number of alternative accounting methods

According to van der Tas (1988), the 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) 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).

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. In the current study, the least number of cases expected was 30.7 for inventory costing practices.

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<sup>8</sup>. 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 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 (e.g.: Emenyonu, 1993; 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<sup>9</sup>.



## 6. Findings and discussion

The current section of the study presents an analysis of the results, statistical tests and related discussion. This study examined 9 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 (Emenyonu, 1993; Herrmann and Thomas, 1995; Emenyonu and Gray, 1996; Canebano 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 4 (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. Furthermore, 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.



**Table 4: Valuation and depreciation of property, plant and equipment practices**

Methods	Bahrain	Egypt	Jordan	Kuwait	Oman	Qatar	KSA	UAE	Total
<b>Panel A:</b>									
<u>Valuation methods:</u>									
a. historical cost	9	19	15	19	10	15	20	20	127
b. revalued amount	1	0	0	0	0	0	0	0	1
c. combination	0	1	0	0	0	0	0	0	1
Total	10	20	15	19	10	15	20	20	129
I index = 0.9779, $\chi^2 = 246.140$ (significant at 5% level), D.F = 2									
<b>Panel B:</b>									
<u>Depreciation methods:</u>									
a. straight-line	10	19	15	18	10	15	19	20	126
b. declining balance	0	0	0	0	0	0	0	0	0
c. units of production	0	0	0	0	0	0	0	0	0
d. combination	0	1	0	0	0	0	1	0	2
Total	10	20	15	18	10	15	20	20	128
I index = 0.9855, $\chi^2 = 120.125$ (significant at 5% level), D.F = 1									

Panel A of the table clearly shows that the historical cost model is the most popular model (127 of 129 companies representing about 98.5%) in the eight countries, while a very limited number (only 2 or about 1.5%) of companies used the revalued amount model (only one company in Bahrain) and a combination of the two models (another 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 inventory valuation. The I index value of 0.9779 suggests the achievement of a high level of harmony on the topic of property, plant and equipment. 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.

Regarding 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 counterparts 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 in the eight countries (126 of 128 companies representing



about 98.4%). Of the 128 companies provided information on methods of depreciation, only two companies (1.6%) 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 (0.9855) 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.

The above result 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 1971/72 and 1991/92 respectively.

## 6.2 Inventory valuation and costing practices

IAS 2 "Inventories" which revised in 2003 and its Egyptian counterpart (EAS 2) 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 5 to measure the level of harmony in the inventory valuation in the eight countries. From Panel A, it is clear that LCM was use predominantly practiced as an inventory valuation method in the eight countries. Of 110 companies disclosed information about inventory valuation methods, 84 companies (76.4%) used LCR valuation method, while other 20 companies (18.2%), most of them from Jordan and KSA, used LCM. Only 5 companies (4.5%) 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 0.6872. Further, Panel A shows significant differences in the inventory valuation method choices among 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 5 presents findings related to inventory costing methods. Of 130 sampled companies, only 94 provided information on inventory costing methods and of them 82 companies (87.2%) used WA, 7 companies (7.4%) used FIFO, and 5 companies (5.3%) used a combination of methods. It should be noted that the LIFO method was never used by any of the 130 companies in the eight countries. The level of harmony was high as the I index = 0.8552 in the eight countries and Chi-square referred to significant differences in the inventory costing method choices among companies in the eight countries.

**Table 5: Inventory valuation and costing practices**

Methods	Bahrain	Egypt	Jordan	Kuwait	Oman	Qatar	KSA	UAE	Total
<b>Panel A:</b>									
<b>Inventory valuation:</b>									
a. LCR <sup>1</sup>	8	18	4	13	7	7	8	19	84
b. LCM <sup>2</sup>	0	1	7	0	1	2	9	0	20
c. cost	0	0	1	0	0	0	0	0	1
d. combination	1	0	0	0	0	0	3	1	5
Total	9	19	12	13	8	9	20	20	110
I index = 0.6872, $\chi^2 = 96.899$ (significant at 5% level), D.F = 3									
<b>Panel:</b>									
<b>Inventory costing:</b>									
a. FIFO <sup>3</sup>	1	0	2	0	0	0	1	3	7
b. LIFO <sup>4</sup>	0	0	0	0	0	0	0	0	0
c. WA <sup>5</sup>	6	12	8	12	7	8	17	12	82
d. combination	1	2	1	0	0	0	1	0	5
Total	8	14	11	12	7	8	19	15	94
I index = 0.8552, $\chi^2 = 119.109$ (significant at 5% level), D.F = 2									

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:**

Table 6 shows results related to valuation of long-term investments or specifically the accounting treatment for investment property. 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 recognized 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 91 companies from the eight countries disclosed information on the valuation of long-term investment. Of the 91 companies, the majority 73 companies (80.2%) used the revalued amount method. In contrast, only 17 companies (18.7%) evaluated long-term investment under cost method and 1 company (1.1%) exercised a combination of two or more methods. The I index of 0.7442 indicates, however, that there is a tendency of agreement towards use of the revalued amount method suggesting that a relatively high level of harmony exists among the eight countries in relation to valuation of long-term investment.



**Table 6: Valuation of long-term investments practices**

Methods	Bahrain	Egypt	Jordan	Kuwait	Oman	Qatar	KSA	UAE	Total
a. cost model	1	0	5	4	2	4	1	0	17
b. fair value model	7	14	6	11	4	7	12	12	73
c. LCM	0	0	0	1	0	0	0	0	1
Total	8	14	11	16	6	11	13	12	91
<i>I</i> index = 0.7442, $\chi^2 = 88.288$ (significant at 5% level), D.F = 2									

This finding is consistent with other previous studies. For instant, Emenyonu and Gray (1996) reported a high level of harmony as the value of *I* index for long-term investment was 0.8471 and 0.6088 in 1971/72 and 1991/92 respectively. A similar finding was provided by Ali et al. (2006) who reported a high value of *I* index of 0.7763

#### 6.4 Other accounting measurement practices:

Tables 7 below provides results related to accounting for goodwill, evaluation of short-term investment, investment in associates and foreign currency translation of assets and liabilities practices. Result related to these areas of accounting measurement suggest a full harmony among the eight countries as the value of *I* index was 1 for each. Accordingly, Chi-square was not performed for these areas of practices.

Regarding accounting for goodwill, two methods are identified to analyse the degree of harmony, these being the capitalized method and the expensed method. Table 7 shows that only 73 companies from the eight countries disclosed information on goodwill. All of them capitalized goodwill confirming a full harmony among the eight countries investigated. This finding is almost consistent with Ali et al. (2006) who reported a high level of harmony of *I* index = 0.9798 and concluded that the majority of the companies investigated in their study recognized goodwill as an asset. However, this result not consistent with other previous studies. For instance, Herrmann and Thomas (1995) concluded a low level of harmony (*I* index = 0.2457) among EU countries. However, Emenyonu and Gray (1996) reported a higher level of harmony with *I* index = 0.6865 and 0.5441 in 1971/72 and 1991/92 respectively.



**Table 7: Other accounting measurement practices**

Methods	Bahrain	Egypt	Jordan	Kuwait	Oman	Qatar	KSA	UAE	Total
<b>Goodwill:</b>									
Capitalized method	4	10	9	17	5	5	7	16	73
<b>Short-term investments:</b>									
Fair value method	8	16	15	20	8	20	13	18	118
<b>Investment in associates:</b>									
Equity method	6	16	8	17	5	10	13	14	89
<b>Foreign currency:</b>									
Current rate	10	20	14	20	10	15	19	20	128
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 7 provide the results which reveal that 118 (90.8%) 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 recognized at cost and the carrying amount is increased or decreased to recognize the investor's share of the profit or loss of the investee after the date of acquisition. Of the sampled companies, 89 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 among the eight countries in relation to investment in associates.



IAS 21 "The effects of changes in foreign exchange rates" and its 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 7 reveals that 128 of 130 sampled companies provided information on the translation of foreign currency and all of them 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 (Bahrain, Egypt, Jordan, Kuwait, Oman, Qatar, KSA, and the UAE) in 2008 is full harmony for four areas of practices namely accounting for goodwill, 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 nine 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 among these countries and examined the extent of harmony of 9 accounting measurement practices. This survey was based on a sample of 130 companies from the selected countries for the financial year 2008. 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 among the eight countries selected in this study in relation to three accounting measurement methods choices namely, accounting for goodwill, 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 in the frequency of accounting measurement methods choices across 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, among 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 relatively small sample of 130 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 generalize 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 2008 financial period, a future study of harmonization by investigating financial statements of a series 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. Therefore, it would be interesting to duplicate this study in other Arab countries.



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## Notes

<sup>1</sup> The abbreviation of IAS/IFRS will be used in this study to mean both International Accounting Standards and International Financial Reporting Standards.

<sup>2</sup> See also section 3 for more details about 'de facto' and 'de jure' harmonization.

<sup>3</sup> It should be noted that the Egyptian Accounting Standards (EAS) are generally compatible with the IASs with the exception of EAS No. 20 "Accounting for lease" (IAS No. 17) to meet the legal requirements in Egypt.

<sup>4</sup> 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).

<sup>5</sup> Early attempts in measuring accounting harmonization such as Nair and Frank (1981) were done using descriptive statistics and variance analysis.

<sup>6</sup> For more details about these indices, see: Archer et al (1996); Krisement (1997); and Tay and Parker (1990).

<sup>7</sup> 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 3 countries as follows:

	country	1	2	3
Method 1		0.5	0.7	0.6
Method 2		0.3	0.1	0.3
Method 3		0.2	0.2	0.1

$$I = (0.5 \times 0.7 \times 0.6 + 0.3 \times 0.1 \times 0.3 + 0.2 \times 0.2 \times 0.1)^{1/(3-1)}$$

$$= 0.223^{1/2}$$

$$= .472$$

<sup>8</sup> For more details about these limitations, see: Tay and Parker, 1990; Archer et al., 1995; Aisbitt, 2001.

<sup>9</sup> The following example explain this hypothetical case. A case of four countries and three methods:

	country	1	2	3	4
Method 1		1.0	1.0	0.0	0.3
Method 2		0	0	0.3	0.5
Method 3		0	0	0.7	0.2

$$I = (1.0 \times 1.0 \times 0 \times 0.3 + 0 \times 0 \times 0.3 \times 0.5 + 0 \times 0 \times 0.7 \times 0.2)^{1/(4-1)}$$

$$= 0^{1/3} = 0$$

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 among 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.



**pendix 1: Companies included in the empirical study:**

No.	Company name	No.	Company name
<b>Bahrain</b>		<b>Oman</b>	
1	Bahrain Cinema Co.	1	Galfar Engineering & Contracting Co.
2	Bahrain Commercial Facilities	2	National Aluminium Products Co.
3	Bahrain Duty Free Shop Complex	3	Oman International Dev. & Inv. Co.
4	Bahrain Mari. & Mer. International Co.	4	Al Omaniya Financial Services Co.
5	Bahrain National Holding Co.	5	Oman & Emirates Investment Hold. Co.
6	Bahrain Telecommunication Co.	6	Al Jazeera Steel Products Co.
7	Bahrain Tourism	7	Al Jazeera Services Co.
8	Esterad Investment Company	8	Oman Cement Co.
9	Nass Corporation	9	Al Anwar Ceramic Tiles Co.
10	Seef Properties BSC	10	Al Hassan Engineering Co.
<b>Egypt</b>		<b>Qatar</b>	
1	Alex. Spinning & Weaving	1	Barwa Real Estate Co.
2	Arab Cotton Ginning	2	Dlala Holding Co.
3	Egy. Co. for Mobile Services	3	First Finance
4	Egyptian Electrical Cables	4	Gulf International Services Co.
5	El Kahera Housing	5	Industries Qatar Co.
6	Egyptians Abroad for Invest. & Develop.	6	National Leasing Holding Co.
7	Egyptian Electrical Cables	7	Qatar Electricity & Water Co.
8	El Swedy Cables	8	Qatar Gas Transport Co.
9	Egyptian Kuwaiti Holding	9	Qatar & Oman Investment Co.
10	El Ahli Investment and Development	10	Qatar Real Estate Investment Co.
11	Egyptian Electrical Cables	11	Salam International Investment Co. Ltd.
12	El Ezz Steel	12	United Development Co.
13	El Kahera Housing	13	Qatar Telecom
14	Nile Cotton Ginning	14	Gulf Holding Company.
15	Orascom Construction Industries	15	Qatar Cinema & Film Distribution Co.
16	Orascom Telecom Holding	<b>KSA</b>	
17	Telecom Egypt	1	Aldrees Petroleum & Transport Ser. Co.
18	Six of October Development & Investment	2	Jarir Marketing Co.
19	El Swedy Cables	3	Al Baha for Development & Invest. Co.
20	El Ahli Investment and Development	4	Astra Industrial Group
<b>Jordan</b>		5	Etihad Atheeb Telecom Co.
1	Alia-The Royal Jordanian Airlines	6	Gassim Agricultural Co.
2	South Electronics	7	Emaar The Economic City
3	Specialized Investment Compounds	8	Saudi Industrial Development Co.
4	Taameer Jordan Hold Public Shareholding	9	The Saudi Chemical Co.



5	Real Estate Development	10	Kingdom Holding Co.
6	Al-Dawliyah for Hotels & Malls	11	Yanbu Cement Co.
7	Jordan Steel	12	Mobile Telecom. Co. Saudi Arabia
8	Jordan Ceramic Industries	13	Tabouk Agricultural Development Co.
9	Al-Tajamouat for Catering and Housing Co. PLC	14	Saudi Telecom Co.
10	The Investors and Eastern Arab for Industrial	15	Saudi Basic Industries Corp.
11	Darwish Al-Khalili & Sons Co. PLC	16	Filling & Packing Material Mfg. Co.
12	Amwal Invest	17	The National Shipping Co. of S. A.
13	Al-Ahlia Enterprises	18	Saudi Arabian Mining Co.
14	United Arab Investors	19	Saudi Electricity Co.
15	Jordanian Expatriated Investment Holding	20	Methanol Chemicals Co.
<b>Kuwait</b>		<b>UAE</b>	
1	Coast Investment & Development Co.	1	Al Dar Properties Co.
2	Global Investment House	2	Sorouh Real Estate Co.
3	Industrial & Financial Investments Co.	3	Arkan Building Material Company.
4	Sokouk Holding Co.	4	RAK Properties
5	Kuwait Portland Cement Co.	5	Emirates Telecommunication Corp.
6	The National Industries Group	6	Foodco Holding Co.
7	Mena Holding Group	7	Umm Al Qaiwain Cement Industries
8	Al Mabance Co.	8	Ras Al-Khaimah Cement Co.
9	Kuwait & Gulf Link Transport Co.	9	Abu Dhabi National Energy Co.
10	Jeezan Holding Co.	10	Aabar Investments Co.
11	Investors Holding Group Co.	11	Dubai Investment Co.
12	Al-Safat Tec Holding Company	12	Emaar Properties Co.
13	Mobile Telecommunications Co.	13	Union Properties Co.
14	Burgan Co. for Well Drilling, Trading & Maint.	14	National Central Cooling Co.
15	Al-Safwa Group Co.	15	Arabtec Holding
16	Al-Madina For Finance and Investment Co.	16	Deyaar Development Co.
17	Aref Investment Group	17	Drake & Scull International
18	The Public Warehousing Co.	18	Gulf Navigation Holding Co.
19	Abyaar Real Estate Development Co.	19	Aramex Co.
20	Kuwait Investment Co.	20	Emirates Integrated Telecom. Co.