The Extent of Listed Manufacturing Companies' Compliance with Mandatory Requirements: Evidence of IAS- Lite from Jordan

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ABSTRACT

This study investigates changes in an accounting system due to external, investor-related, and internal, governmentally driven, pressures. An empirical study is undertaken to measure the extent of compliance and give explanations for any variations. The empirical part focuses on the mandatory disclosure of Jordanian manufacturing companies before and after the extension of disclosure requirements in 1998. The study compares the level of mandatory financial disclosure in 1997 and 2008, and investigates the relationship between the level of mandatory disclosure and company characteristics (size, industry type, age, performance and ownership structure).

Levels of disclosure are computed by means of a disclosure index. Different indices have been determined for the years 1997 and 2008 to reflect the different mandatory disclosure requirements of the two years. Levels of disclosure have been calculated for a sample of 51 Jordanian manufacturing companies listed on the ASE in both years. Both in 1997 and 2008 companies were not fully complying with all requirements implied by the regulations. The less than full compliance is evidence that 'IAS lite' may be an issue in Jordan.

Keywords: International Accounting Standards (IAS), IAS-lite, Annual Reports; Mandatory Disclosure; Jordanian Regulation; Amman Stock Exchange.

INTRODUCTION

The form and content of financial reporting at any time and in any place depend on the regulations that apply at that time and in that place. These regulations are not static but change over time. As Roberts *et al.* (1998) and others have argued, the regulations themselves, changes in the regulations, and the actual accounting and reporting practices to be found, are subject to many factors, both internal to individual countries and external. These are summarised in Table 1. It is important to note that the accounting system in practice reflects not only the influence of regulation in the form of mandatory practices of accounting and disclosure, but the broader influences of society and culture in the form of voluntary practices.

In the Jordanian setting, the framework of Jordanian financial reporting before 1998 was entirely different from the framework that emerged in that year. Before 1998, financial reporting regulations mainly came from two sources, the Amman Financial Market (AFM) and the Companies Act 1989 (which was amended by the Companies Act 1997). These lacked financial reporting requirements and guidance for what should be disclosed and how companies should prepare their annual reports. Thus, the need for external input, through foreign investment, and the internal institutions' assessment required a change in mandatory reporting requirements. Under the Securities Law 1997, a new regulatory system was introduced for what was in effect a new Jordanian capital market in 1998, as the Jordanian financial market

was transformed into a modern capital market with a   new legal framework.
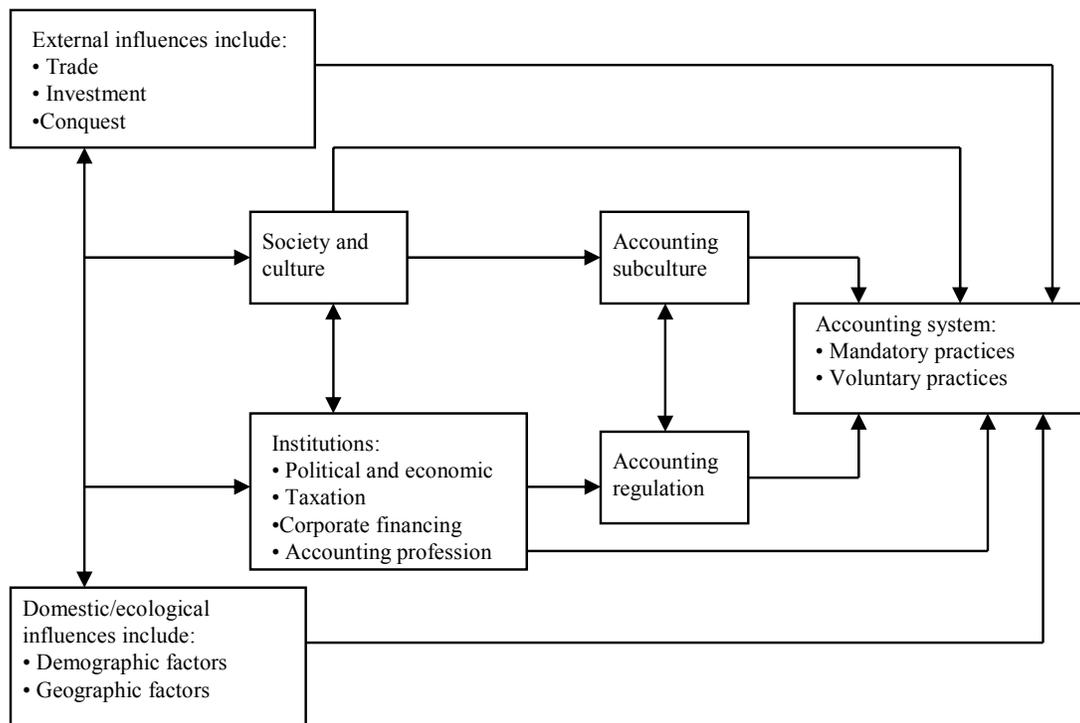
Figure 1: Influences on accounting regulation and practices

Source: adapted from Roberts *et al.* (1998, p. 9), which was based on Gray (1988).

This included new financial disclosure requirements imposed upon companies listed on the Amman Stock Exchange (ASE). The regulation of the capital market was divided among three institutions, the Jordan Securities Commission (JSC), the Amman Stock Exchange (ASE), and the Securities Depository Centre (SDC) (Al-Akra et al., 2009). Further, in 2002 the JSC introduced new and more extensive disclosure requirements for companies listed on the ASE. For the first time in 2002, listed Jordanian companies were required to adopt the full version of International Accounting Standards (IAS)[i]/ International Financial

Reporting Standards (IFRS) in periodic financial statements.

These changes in the accounting environment reflected the new developments and growth in the Jordanian economy, and included new types of companies such as 'private shareholding companies', 'companies operating in Free Zones', 'civil companies' and 'non-for-profit companies', often involving foreign individual investors and companies. The underlying aim of the accounting regulation modifications in Jordan was to create an attractive investment climate to encourage both domestic and foreign investors. Part of this series of

changes is the introduction of IAS/IFRS in order to adopt a broadly understood accounting framework (Al-Akra et al., 2009). Since then foreign investment has steadily grown (Al-Akra et al., 2009). This reflects the governmental movement, which is aiming to turn this into a societal development and a cultural characteristic as Jordan is opening itself wide for external influences, different for instance to some European business cultures (e.g. Germany) which are not keen on outsiders entering the market (Al-Akra et al., 2009).

What remains to be analysed is whether these political and economic developments have led to listed companies complying with the new accounting requirements, as the changes in the Jordanian regulatory system and the resulting changes in accounting and financial reporting requirements in recent years provide an opportunity to assess the extent to which Jordanian companies comply with the published requirements. Although it might be expected that a failure to comply fully with mandatory requirements would be rare, it should be noted that some of the accounting and disclosure requirements are expressed in indirect terms. Rather than providing an exhaustive list of disclosure requirements, the regulators have tended to require companies to follow a less well defined system such as GAAP or IAS. Although disclosure requirements may be derived from such systems, ensuring that companies comply in full with such requirements may be difficult. This is particularly recognised in the case of IAS, with continuing suspicion that many companies that claim to comply fall short in practice, without censure from auditors – what has been referred to as 'IAS lite' (Cairns, 2001; Haider, 2004). The issue of 'IAS lite' is often associated with accounting in emerging economies, particularly those of Eastern Europe and East Asia. Abd-Elsalam and Weetman (2003), in their study of the adoption of IAS in Egypt, suggest that lack of

familiarity with some requirements of IAS, as a consequence of non-availability of the standards in official Arabic translations during the period they researched, could have lead to under-compliance. This issue was not explored in the questionnaire-based study of smaller companies in Bahrain conducted by Joshi and Ramadhan (2002), while Chamisa (2000) found variations in the degree of compliance with IAS in Zimbabwe that could be consistent with 'IAS lite'. Finally, Al-Akra et al. (2010) found that the Jordanian environmental factors, including political, economic, legal and cultural, influenced the Jordanian accounting regulation developments and the adoption of International Financial Reporting Standards (IFRS).

Although there have been earlier studies of disclosure in Jordan, these all took place before the full reforms of 2002, as discussed above. The present study compares mandatory disclosure by a sample of Jordanian manufacturing companies before and several years after the reforms, thus allowing for an evaluation of how effective the reforms have been in enhancing the level of financial disclosure (and hence the transparency of the Jordanian capital market). Therefore, in order to test the above theoretical arguments the objectives of this paper are first to examine empirically the extent to which companies complied with the mandatory disclosure requirements applying to companies listed on ASE both before and after the regulatory changes of 1998, and second to explain the variation in the level of compliance by reference to company characteristics such as size, age, type of industry, ownership structure and performance.

The main aim of the next section of the paper is to outline the general framework of Jordanian financial reporting and to justify undertaking the current study. Section 3 summarises previous empirical studies of financial disclosure in terms of their objectives, method

and principal findings. Following this, Section 4 establishes the research method and the development of hypotheses and discusses data collection. The fifth section presents the statistical analysis of the data, and finally Section 6 comments on the results and their implications.

REVIEW OF FINANCIAL DISCLOSURE STUDIES

The main objective of the current study was to measure companies' compliance with the Jordanian mandatory disclosure requirements, in a bid to determine the extent to which influential factors affected the accounting systems and following disclosure levels. This section reviews prior studies that examined the extent of compliance with mandatory disclosure requirements, and similar empirical studies that concentrated on other aspects of financial disclosure. Table 1 contains a list of previous empirical studies on financial disclosure that used a disclosure index approach. These studies are classified according to whether they focus on developed countries or developing countries. The table indicates whether the studies concentrated on mandatory or voluntary disclosure, or covered both aspects of disclosure. In addition, the table indicates whether a weighted or an un-weighted disclosure index was used in each study.

Table 1: Prior studies of financial disclosure

Year	Authors	Countries	MD only	VD only	MD + VD	Weighted Index	Unweighted Index
A: studies of developed countries							
1961	Cerf	USA			✔	✔	
1971	Singhvi and Desai	USA			✔	✔	
1975	Buzby	USA			✔	✔	
1975,76	Barrett	USA, UK, Japan, France, Sweden, West Germany, Netherlands			✔	✔	
1979a,b	Firth	UK		✔		✔	
1980	Firth	UK		✔		✔	✔
1982	McNally *et al.*	New Zealand		✔			✔
1989	Cooke	Sweden			✔		✔
1991	Cooke	Japan		✔			✔
1992/3	Cooke	Japan			✔		✔
1993	Malone *et al.*	USA			✔	✔	
1994	Wallace *et al.*	Spain	✔			✔	
1995	Raffournier	Switzerland		✔			✔
1995	Meek *et al.*	USA, UK and Europe		✔			
1997	Inchausti	Spain			✔	✔	
2000	Depoers	France		✔			✔
2001	Watson *et al.*	UK		✔			✔
B: studies of developing countries							
1967	Singhvi	India			✔	✔	
1987	Chow and Wong-Boren	Mexico		✔		✔	✔
1988	Wallace	Nigeria			✔		

Year	Authors	Countries	MD only	VD only	MD + VD	Weighted Index	Unweighted Index
1990	Benjamin et al.	Hong Kong (HK)	✔				✔
1993	Mutter	Jordan	✔				
1993	Abayo et al.	Tanzania			✔		✔
1994	Ahmed and Nicholls	Bangladesh	✔				✔
1994	Hossain et al.	Malaysia		✔			
1994	Solas	Jordan	✔				✔
1995	Wallace and Naser	Hong Kong	✔				✔
1995	Al-Modakhi	Saudi Arabia			✔		✔
1997	Al-Mulhem	Saudi Arabia			✔		✔
1997	Suwaidan	Jordan		✔			✔
1997	Patton and Zelenka	Czech Republic	✔				
1998	Naser	Jordan		✔			
1998	Owusu-Ansah	Zimbabwe	✔				✔
1999	Alrazeen	Saudi Arabia			✔	✔	✔
1999	Curuk	Turkey	✔	✔	✔		✔
2000	Naser and Al-Khatib	Jordan		✔			
2001	Al-Hussaini	Kuwait			✔	✔	✔
2002	Chau and Gray	HK and Singapore		✔			
2002	Haniffa and Cooke	Malaysia		✔			✔
2003	Naser and Nuseibeh	Saudi Arabia			✔	✔	✔
2005	Akhtaruddin	Bangladesh	✔				✔
2009	Dahawy	Egypt	✔			✔	
2009	Hossain and Hammami	Qatar		✔			✔
2010	Abdur Rouf	Bangladesh		✔			✔
2010a/b	Al-Akra et al.	Jordan	✔	✔			✔
2011	Omar and Simon	Jordan			✔	✔	

Many of the studies listed in Table 1 have been analysed by Wallace *et al.* (1994) and by Ahmed and Courtis (1999). Wallace *et al.* (1994) noted that the results of prior studies were inconsistent, and attributed this to differences in factors such as sample size, statistical methods, research settings, index construction, and the type and number of company characteristics examined. Ahmed and Courtis (1999) also noted that there was variation in the relationship between independent variables and dependent variables in these studies, and they concluded that this variation was due to different items constructing the disclosure indices, different variables selected, sampling error, different kind of measurements used to identify the variables and different statistical techniques.

Since 1961 financial disclosure has been examined mainly from three different angles. First, researchers measured the extent of *voluntary* disclosure in the annual reports, assuming either that there was full compliance with mandatory requirements or that there were no mandatory disclosure requirements. Secondly, few researchers sought to measure the extent of companies'

compliance with *mandatory* disclosure requirements (the level of mandatory disclosure) without also looking at voluntary disclosure. Thirdly, other researchers measured the overall level of financial disclosure, including mandatory and voluntary items, in some cases distinguishing them and in others not. Most researchers constructed a disclosure index or indices,[ii] in order to measure the quantity of financial disclosure (sometimes this was stated to be a proxy for disclosure quality).

A disclosure index is constructed by identifying lists of items that may be disclosed in the financial statements being examined, checking which items are actually disclosed, and calculating the ratio of items disclosed to the maximum disclosure set. The checklists prepared have varied from one study to another based on each study's objectives. Hence, for example some lists included only voluntary or mandatory items, while other lists included a mix of mandatory and voluntary items. There was also a variation in the number of items included in these checklists. In the studies listed in Table 1, the checklists ranged from minimum of 17 items by Barrett (1975, 1976) to a maximum of 250 items by Curuk (1999).

Furthermore, researchers have used two different types of indices – weighted and un-weighted – in their studies. Weighted indices usually reflect the importance of each item as determined by the users of financial reporting by asking a group of users to indicate how important they regard each item according to a given scoring scale. Un-weighted indices have been used by many researchers, who argued that weighted indices may reflect the subjectivity of either researchers or users rather than the actual relative importance of items. Un-weighted indices are usually applied dichotomously, with an item scored '1' if disclosed in the annual reports and scored '0' if not disclosed.[iii] In those studies where both approaches were used, high correlations between

the weighted and un-weighted disclosure indices were generally obtained.

Disclosure indices have been used in prior research as dependent variables in order to measure the relationship between the level of financial disclosure and various company characteristics as independent variables. The number and choice of company characteristics varies among prior studies, reflecting the absence of a clear overall theory as to which company characteristics are likely to determine levels of financial disclosure. The number of independent variables in the studies listed in Table 1 range from one variable (ownership form, that is, whether or not family owners are dominant – Chau and Gray, 2002) to fourteen variables (company size, assets in place, industry type, listing age, complexity of business, level of diversification, multiple listing status, foreign activities, gearing, top ten shareholders, foreign ownership, institutional investors, profitability, and type of auditors – Haniffa and Cooke, 2002). Within this context, Ahmed and Courtis (1999) note that there are five company characteristics most frequently used in previous studies (company size, listing status, leverage, profitability, and size of auditor). The selection of variables is usually justified by reference to theories of financial disclosure such as signalling theory, agency theory, cost benefit theory and capital need theory, though the actual *form* of the relationship between such variables and the level of financial disclosure is not obvious (Haniffa and Cooke, 2002). The company characteristic variables themselves are measured in different ways. For instance, company size is measured by no fewer than ten different numbers: total assets, net assets, total sales, number of shareholders, capital employed, market capitalisation, book value of debt, net income, shareholders' contributed capital, and number of employees.

A number of studies on corporate disclosure, both

mandatory and voluntary, have been undertaken in recent years. Dahawy (2009) investigated mandatory disclosure levels in Egypt, and found that the Egyptian culture is the greatest obstacle to complying with disclosure requirements, and that auditor affiliation with an international firm emerged as the most significant variable. Elsayed and Hoque (2010) researched voluntary disclosure levels and the impact of intensified global competition in Egypt. Contrary to their expectations, they found that there was no significant relationship between levels of voluntary disclosure and intensity of global competition. Hossain and Hammami (2009) measured voluntary disclosure levels in Qatar, and found age, size, complexity and assets-in-place as most significant variables. Abdur Rouf (2010) investigated voluntary disclosure in Bangladesh and found that most significantly board size, board structure and board auditing committee affect voluntary disclosure levels positively. Al-Akra et al. (2010 a) investigated the effect of disclosure regulation reforms in Jordan, and found that such reforms affected the levels of mandatory disclosure compliance significantly. A similar effect was achieved through mandating auditing committees (Al-Akra et al., 2010 a). Al-Akra et al. (2010 b) researched the association between privatisation and voluntary disclosure levels in Jordan, and found a positive association, in particular with regard to foreign direct investment and changes in accounting regulation taking place with privatisation. Omar and Simon (2011) analysed mandatory and voluntary corporate disclosure in Jordan, and identified that there was a significant increase in aggregate corporate disclosure, in comparison to previous studies, after the regulatory changes in Jordan. Chau and Gray (2010) investigated voluntary disclosure in Hong Kong, and found that in family-owned businesses hiring an external chairman has a positive effect on voluntary disclosure levels. Jiang

et al. (2011) researched voluntary disclosures and their effect on information asymmetry in New Zealand, and found that corporate disclosures are important to reduce information asymmetry in concentrated ownership structures. Iatridis (2011) analysed the motives of UK companies to disclose high or low quality disclosures, and found earnings management to be one factor of deliberate low quality disclosures, whereas high quality is associated with capital needs.

In addition to differences in the independent variables used and in the construction of disclosure indices as dependent variables, prior studies differ in their sample sizes, ranging from a high of 527 companies (Cerf, 1961) to a low of 33 companies (Al-Modahki, 1995). Moreover researchers have applied their indices over different time periods ranging from one to ten years. Studies based on one year are most common, for example Cerf (1961), Singhvi (1968), Cooke (1989, 1991, 1992, 1993), Malone *et al.* (1993), Aboyo *et al.* (1993), Suwaidan (1997), Owusu-Ansah (1998), Alrazeen (1999), and Chau and Gray (2002). Studies covering more than one year may investigate whether disclosure trends are changing through time across the sample, or whether variation in disclosure is better explained by company-specific factors (for example, increased disclosure may be a response to poor performance). The longest time period of ten years was covered by the early comparative studies of Barrett (1975, 1976). Although many studies have used linear regression analyses, increasingly these are being supplemented by alternatives such as rank regression.

As Wallace *et al.* (1994) have noted:

The changing features of prior studies, such as the number of firms included in the sample, the type and number of firm characteristics examined, the number of information items that formed the basis of the set of disclosure indexes as dependant variable, the different

statistical methodologies used to analyse the data and the different settings (i.e., countries) of the study, have jointly or severally contributed to the mixed results from these studies. As a result, an investigation, in other settings, of corporate characteristics that correlate with the extent of disclosure seems justified.

The present study reflects the issues that Wallace *et al.* (1994) identify. It is based on Jordan, a country that has been studied before in earlier periods, and the research approach adopted takes into account issues raised by earlier researchers. Many of the points raised in this section about prior studies may not have an obvious resolution, and to some extent any researcher must make choices about what data to collect, what variables to analyse and how to measure them, and what methods of analysis to use. The choices made in the present study are discussed in the next section.

RESEARCH QUESTIONS AND HYPOTHESES

In Figure 1 it was established by Roberts *et al.* (1998), and Gray (1988) that any development in accounting regulations will affect financial reporting and financial disclosure practices. The Jordanian accounting change took place due to external expectations, part of attracting foreign investors, and internal drive, governmental willingness to create an open system, which also reflects the cultural characteristic of being a very open system to external influences. The following hypotheses are developed in order to answer whether listed companies indeed comply with the new requirements and any variations found are explained through specific company characteristics. Based on this theoretical argument the main question of the current study is the extent to which Jordanian manufacturing companies complied with the mandatory disclosure requirements in Jordan before and after the reform of the financial system in 1998. The answer to this question

will be provided through testing the following hypotheses:

H1: Jordanian companies fully comply with the mandatory disclosure requirements in the year 1997.

H2: Jordanian companies fully comply with the mandatory disclosure requirements in the year 2008.

Previous researchers have attempted to explain the variation in the level of financial disclosure across samples of companies by reference to company characteristics. Based on a review of the literature, the following variables were considered most likely to be relevant in explaining cross-sectional variation in disclosure levels: company size, industry type, structure of ownership (government, private and foreign ownership), company age and managerial performance.

Company Size:

Most prior studies argue that larger companies, other things being equal, are more likely to disclose more items than smaller companies. This is often explained in terms of stakeholder theories: larger companies have more diverse stakeholder groups who will be interested in a wider range of issues, and larger companies will therefore meet these stakeholder demands through providing more disclosure. In the case of mandatory disclosure, larger companies may be more subject to public scrutiny or more sensitive to criticism for falling short of disclosure requirements, and thus may be more likely to aim for maximum compliance. The costs of failure to comply fully may be perceived by such companies as outweighing the benefits from non-compliance, whereas the costs of non-compliance may be relatively less for smaller companies. The literature provides a number of other reasons explaining why large companies might disclose more information than other

companies: see for instance Singhvi (1968) and Singhvi and Desai (1971).

As noted in the previous section, company size has been measured in at least ten different ways in previous studies. In general, there is no theoretical reason to choose one measure rather than another (Cooke, 1989). Therefore, the current study has used capital employed as a proxy measure of company size, in line with Lang and Lundholm (1993), and Marston (2003). The following hypothesis is tested:

H03: there is no association between capital employed and the extent of company compliance with mandatory disclosure requirements in 1997 and 2008.

Ownership Structure:

Ownership structure as an independent variable is usually motivated by agency theory. It is argued that companies with a large number of shareholders experience separation between ownership and control. In such situations, managers will face conflicting incentives. They may wish to suppress information in order to conceal situations where they are acting opportunistically. On the other hand, they may prefer to provide information to signal that they are *not* behaving in ways that are inconsistent with the interests of owners. Where ownership is more concentrated, holders of large blocks may have inside access (possibly through board membership) to information and may consider that wider disclosure to minority investors is not in their own interests. Where the government is a significant owner, it may be less likely to enforce mandatory disclosure requirements, as it can probably obtain information directly. The presence of substantial foreign owners, who may come from countries where accounting disclosure is more sophisticated, may be associated with increased disclosure to satisfy these investors'

expectations.

Ownership structure as an explanatory variable has been examined in a number of different ways, in this study, we considered that government or foreign shareholders became significant when they held collectively at least 10% of a company's share capital (this is consistent with the prior study in Jordan carried out by Suwaidan, 1997, on the basis of Companies Act 1989, Article 102). Jordanian companies in 2008 are expected to have differing ownership structures from 1997, as the period between these years was marked by a substantial privatisation campaign. In 1997 a very high percentage of government ownership was concentrated mainly in the infrastructure sectors (transport, electricity, water and telecommunications), whereas partial government ownership was found in other sectors, for example in many manufacturing companies. Recently the Jordanian government has recognised that the future growth of the economy will depend primarily on a more practically involved role of the private sector and foreign investments. Therefore, the government aims to reduce the Jordanian government's stake in these sectors. Bearing in mind the partial impact on manufacturing companies of this variation in ownership structure, two different types of ownership structure are examined in this study –government ownership and foreign ownership – measured by percentage of each type of ownership. The following hypotheses were tested:

H04: There is no association between government ownership and the extent of company compliance with mandatory disclosure requirements in 1997 and 2008.

H05: There is no association between foreign ownership and the extent of company compliance with mandatory disclosure requirements in 1997 and 2008.

Industry Type:

Meek *et al.* (1995, p. 559) note that 'proprietary (i.e. competitive disadvantage and political) costs vary across industry. For example, because of the nature of their products and their research and development, chemical companies are likely to be more sensitive about disclosure to competitors and the public than companies in certain other industries'. Many other studies have used industry type as a variable to help explain cross-sectional variation in levels of disclosure. Again, in the case of mandatory disclosure, it is theorised that companies in certain industries may be prepared not to disclose required items if they perceive that the costs of disclosure are greater than the costs (including any penalties) of non-disclosure. The sampled manufacturing companies in this research are classified into five industry types: (1) natural resources industry, (2) food and clothing industry, (3) pharmaceuticals and cosmetics industry, (4) building materials and equipments and (5) additional industries, and these are represented in the following hypothesis:

H06: There is no association between industry type and the extent of company compliance with mandatory disclosure requirements in 1997 and 2008.

Performance:

Company performance has been increasingly used as an explanatory variable. Recent studies using a performance variable include Abu-Nassar (1993), Wallace and Naser (1995), Meek *et al.* (1995), Patton and Zelenka (1997), Inchausti (1997), Suwaidan (1997), Naser (1998), Naser and Al-Khatib (2000), Al-Hussaini (2001), Haniffa and Cooke (2002), and Watson *et al.* (2002). Agency theory suggests that because of the separation between the managers and the owners of companies and the difficulties that investors face in

order to observe directly the extent and the quality of managers' efforts on their behalf, investors will depend on reports of managers' performance to monitor their investments and to ensure that managers' effort is directed towards investors' interests. Managers of companies with better performance than others wish to distinguish their performance through a process of signalling this information. The following hypothesis refers to net profit:

H07: There is no association between net profit and the extent of company compliance with mandatory disclosure requirements in 1997 and 2008.

Company Age:

Company age has also been used as an explanatory variable in a number of prior studies. The argument for this variable is based on older companies disclosing more information than younger companies. Mintzberg (1979) has argued that the structure and the behaviour of older companies is more formalised than younger ones, and this may imply that older companies are more likely to comply with regulations than younger companies. Abu-Nassar (1993) gave two different reasons why older companies might disclose more information than younger companies: (1) availability of information about the past performance in older companies facilitates the prediction of future performance and (2) older companies are more likely than younger companies to realise the benefits of financial disclosure, such as getting finance and marketability of securities. Owusu-Ansah (1998), on the other hand, listed three different reasons for older companies to disclose: (1) the competitive disadvantage compared to younger companies drives them to disclose certain items, (2) the cost and ease of collecting information and disclosing such information is more likely to cause difficulties for

younger companies rather than for older companies and (3) younger companies are more likely to lack a 'track record' to rely on for public disclosure. We therefore test the following hypothesis:

H08: There is no association between company age and the extent of company compliance with mandatory disclosure requirements in 1997 and 2008.

Summary

Table 2 shows the predicted direction of association for each independent variable, and shows the proxy measures that are used for each variable.

Table 2: Proxies and predicted signs for company characteristics

Hypotheses	Predicted sign	Proxies
Company size	+	Rank of capital employed
Industry type	–/+	Five industry dummy variables
Government Ownership	–/+	10% or more is considered influential
Foreign Ownership	–/+	10% or more is considered influential
Company Age	+	Rank of year since establishment
Performance	+	Rank of net profit

Data used in the analysis for the independent variables came mainly from the companies' annual reports, supplemented where necessary (in particular data on company age) from the Jordanian Shareholding Companies Guides.

RESEARCH DESIGN
Sample Selection

As our objective was to compare mandatory financial disclosure in the annual reports of companies listed on the Amman Stock Exchange before and after the new accounting developments in 1998, the years 1997 and 2008 were chosen for comparison. 1997 was the last year before the disclosure changes in 1998, while 2008 was the most recent year for which financial statements were available. Because financial companies such as banks, insurance companies and investment companies have specific accounting issues (and in some cases are subject to particular accounting requirements not relevant for most companies), we decided to limit our investigation to manufacturing companies. The Jordanian Shareholding Companies Guides for the years 1997 and 2008 were used to find out the number of listed manufacturing companies in Jordan. There were 70 manufacturing companies listed on the AFM in 1997 (out of a total of 139 listed companies) and 91 manufacturing companies listed on the ASE in 2008 (out of a total of 158 listed companies). To allow for comparisons between the two years, any company not listed in both 1997 and 2008 was excluded. 28 manufacturing companies newly listed after 1997, 4 companies closed down after 1997 and 3 companies suspended after 1997 were thus excluded. Therefore, the initial sample for this research included 63 companies.

Useable sets of annual reports for 27 companies were available in the library of JSC, and a further 24 sets of

annual reports were collected by contacting companies directly. Hence a total of 51 sets of useable annual reports for Jordanian manufacturing companies listed in both 1997 and 2008 were obtained. Thus, our sample represents 73% of listed manufacturing companies in 1997 and 56% of listed manufacturing companies in 2008. All of the reports were in the Arabic language.

Index Development

Mandatory disclosure has been assessed in prior studies by measuring the degree to which companies comply (individually and on average) with the mandatory disclosure requirements in force at a given date. The mandatory requirements are collected from accounting regulations, such as Companies Acts, accounting standards and stock exchange requirements, in the country or countries being studied. These requirements are summarised in the form of a checklist. For the present study, separate checklists were prepared for 1997 and 2008, which are attached in the Appendix. As IASs have been used in Jordan since early 1990s and were imposed as mandatory requirements by the JSC in 1998, the checklist of mandatory items for 1997 in this research was based on mandatory items required by the versions of IAS 1, IAS 5, and IAS 7 in force in 1997, while the corresponding part of the checklist for 2008 was based on mandatory items required by the versions of IAS 1 and IAS 7 in force in 2008.[iv] Prior studies of disclosure in Jordan had also used IASs as the main basis for their checklists, for example, Solas (1994) had accepted IAS 1 and IAS 5 as an approximate model for adequate financial disclosure in the annual reports of Jordanian companies. Al-Hussaini (2001), in his study of disclosure in Kuwait (a country with some similarities to Jordan in terms of financial reporting) took IAS 1 and IAS 5 as the basis for measuring the compliance of Kuwaiti companies, as the use of IASs was mandatory in

Kuwait. The current study expands on Solas (1994) and Al-Hussaini (2001) by adding fundamental cash flow statement items. The checklist for the year 1997, based on 33 mandatory items,[v] and the checklist for the year 2008, based on 91 mandatory items, included not only items required by IAS but also items required from 1998 by the JSC for companies listed on ASE.

The mandatory disclosure checklist for 1997 was divided into five major parts, as categorised by IAS 5: general information, balance sheet information, income statement information, cash flow statement information and accounting policy information. The checklist for 2008 was first divided into two main parts: mandatory disclosure requirements required by IAS for 2008 and mandatory disclosure requirements required by JSC since 1998. The first section was sub-divided into six major parts: general information, accounting policy information, balance sheet information, income statement information, statement of changes in equity information and cash flow statement information. The second section included the Chairman's speech, the report of the Board of Directors and further items required by the JSC.

It was considered that there may be items included in the checklists that might not be applicable to all of the sample companies, as some companies might not have undertaken particular transactions or been subject to particular events giving rise to such items. We followed the same approach as Cooke (1989), by reviewing the annual reports of the entirety of sampled companies to be aware of the items in the checklists that might not be applicable to some companies in the sample. The benefit of this approach is that it reduces the risk of penalising companies for the omission of items that are in fact irrelevant to their operations. We actually carried out this review in two stages. First, each annual report in the sample was tested by using the appropriate version

(1997 or 2008) of the full checklist. This helped in gaining familiarity with the checklists and the annual reports themselves. Then each checklist was reviewed by reference to the company's accounts to determine whether any items not disclosed were 'not applicable' rather than omissions. All the annual reports were retested by the same procedure before computing the index ratio for each company to identify and correct any error or misunderstanding regarding any item in the annual reports. This procedure not only enhanced the validity of the research instrument, by identifying any items that had been inadequately specified on the checklists, but also improved the reliability of the disclosure indices.

It was decided to use the dichotomous approach to coding whether an item was disclosed (coded as '1') or not disclosed (coded as '0'), to avoid problems in assessing whether partial disclosure occurred. No weighting of different items was attempted, given that this is often a subjective process, and prior research suggests that it does not enhance the reliability of results. For each annual report in both of the two years being studied, two different scores were determined. The first score is the 'Maximum Number of Applicable Items' (*MNAI*) and the second score is the 'Total Actual Number of Disclosed Items' (*TANDI*). The disclosure index (*DIR*) is computed for each company's annual report by dividing the *TANDI* by the *MNAI*. More

formally:

$$TANDI = \sum_{j=1}^{n} dj$$

where $d_j =$ 1 if the item *j* is disclosed, and `0 if the item dj is not disclosed n = the number of items applicable to each company:

for year 1997, n 33

for year 2008, n 91

The Disclosure Index Ratio (DIR) is computed for each company for both years as follows:

$$DIR = \frac{TANDI}{MNAI}$$

ANALYSIS

The main finding of the empirical research is that Jordanian manufacturing companies did not fully comply with mandatory disclosure requirements in 1997 and 2008. The level of disclosure of each individual item is attached in the Appendix. Although we expected that there would be some shortfall, given that the mandatory disclosure requirements in both 1997 and 2008 were defined (entirely in 1997, in part in 2008) not specifically but indirectly through the requirement to comply with IAS, we were surprised with the relatively low level of compliance with the disclosure requirements of the JSC in 2008, as shown in Table 3.

Table 3: Total actual number of disclosed items

	Max. possible score	**Mean**	**S.D.**	**Min.**	**Max.**
Year 1997					
IAS score	33	24.75	3.26	16	31
Year 2008					
JSC score	45	30.25	7.39	10	41
IAS score	46	40.53	2.56	29	45
Total	91	70.78	8.74	47	85

In 1997, the IASs taken as the basis of the disclosure index required a total of 33 items, and the companies in the sample disclosed on average about 25 of these (equivalent to a raw average disclosure rate of 75%, though in practice the disclosure index will be higher as some disclosures will not be applicable to specific companies). In 2008, the IASs taken as the basis of the disclosure index required a total of 46 disclosures, and the companies in the sample disclosed on average about 40 of these. Although this represents a relative increase in the rate of compliance with IASs, the introduction of a further 45 disclosures based on the requirements of the JSC exhibits a much lower compliance rate of about 66%. Table 4 reports the summary of the MDI for both years:

Table 4: Mandatory disclosure index

Year	Mean	S.D.	Min.	Max.
1997	0.84	0.10	0.55	1.00
2008	0.83	0.08	0.59	0.98

There is little difference in the distribution of the MDI between the two years (in both years the distribution is negatively skewed). However, as noted above, the level of compliance with IAS requirements has increased, while there were in 2008 still shortfalls in compliance with the JSC's requirements for companies listed on the Amman Stock Exchange.

Univariate analysis (association tests)

Company Size:

Given the skewed distribution of the dependent variable MDI, we made use of a range of non-parametric statistics to test the degree of association between MDI and each of the independent variables. Company size was proxied by capital employed, and the association between this variable and MDI was tested using Kendall's rank correlation coefficient (tau). The results

are shown in Table 5.

Table 5: Association of capital employed, performance and age with MDI

	1997	2008
Capital employed		
Kendall's tau	0.203*	0.291**
Sig. (1-tailed)	0.023	0.002
Performance		
Kendall's tau	0.086	0.316**
Sig. (1-tailed)	0.202	0.001
Age		
Kendall's tau	0.116	0.375**
Sig. (1-tailed)	0.126	0.000
N	51	51

*   Correlation is significant at 0.05 level (1-tailed).
**   Correlation is significant at 0.01 level (1-tailed).

There is a statistically significant association between capital employed (as a proxy measure of company size) and the level of mandatory disclosure in both years. Thus, these results allow us to reject the null hypothesis H03.

Ownership Structure:

Two types of ownership structure were explored in this paper: government and foreign ownership. We considered that a total shareholding of 10% or more by government or foreign shareholders was likely to be influential in explaining a company's disclosure practices. Table 6 shows a Mann-Whitney test of the association between ownership structure and the extent of mandatory disclosure in the two years. In this test,

companies were ranked in ascending order of MDI, then split into two groups, depending on whether the particular category of ownership was or was not considered influential. It will be noted that, even in 1997, relatively few companies in the sample had more than 10% government ownership, while foreign ownership was more frequent in both years (and more companies had at least 10% foreign ownership in 2008 than in 1997, consistent with the increasing international profile of the ASE). The only statistically significant result is that for foreign ownership in 2008, where the Mann-Whitney test suggests that the mean rank of companies with 10% or more foreign ownership is significantly different from the mean rank of companies with less than 10% foreign ownership (indeed, the implication is that foreign ownership in 2008 is associated with higher mandatory disclosure). We are therefore unable to reject the null hypothesis H04 (government ownership) in both years and the null hypothesis H05 (foreign ownership) in 1997, but we can reject the null hypothesis H05 in 2008.

Table 6: Association of ownership structure and MDI

	Government Ownership		Foreign Ownership	
	(1)	(2)	(1)	(2)
1997				
No of cases	43	8	36	15
Mean rank	25.05	31.13	24.94	28.53
Sum of ranks	1077.00	249.00	898.00	428.00
Mann-Whitney U	131.000		232.000	
Z value	1.064		0.787	
Sig. (2-tailed)	0.287		0.431	
2008				
No of cases	45	6	30	21
Mean rank	24.70	35.75	22.47	31.05
Sum of ranks	111.50	214.50	674.00	652.00
Mann-Whitney U	76.500		209.000	
Z value	1.711		2.029	
Sig. (2-tailed)	0.087		0.042	

(1) ownership not influential; (2) ownership influential

Industry Type:

Industry type was examined in the current study by classifying the sampled companies using five industry dummy variables:

(A) 1 if the company is in the natural resources industry, 0 otherwise

(B) 1 if the company is in the food and clothing industry, 0 otherwise

(C)   1 if the company is in the pharmaceuticals and cosmetics industry, 0 otherwise

(D)   1 if the company is in the building materials and equipment industry, 0 otherwise

(E)   1 if the company is in any other industry ('additional industries'), 0 otherwise.

We employed Kruskal-Wallis tests to measure the association between industry type variables with Mandatory disclosure index in both years. Table 7 shows that the on

only statistically significant association between MDI and industry relates to the natural resources industry, and this applies in both 1997 and 2008. It is likely, however, that this result reflects the fact that natural resources companies in the sample tended to be larger and older than companies in other industries. Hence, we cannot reject the null hypothesis H06 for the various industry types, except for natural resources.

Table 7: Association of industry and MDI

	Industry 1		Industry 2		Industry 3		Industry 4		Industry 5	
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
1997										
Cases	7	44	12	39	5	46	17	34	10	41
Mean-R	23.3	43.1	25.7	27.0	26.8	19.1	28.0	22.0	26.7	23.2
Chi-Sq.	10.748		0.066		1.200		1.854		0.459	
d.f.	1		1		1		1		1	
Asymp. Sig.	0.001		0.798		0.273		0.173		0.498	
2008										
Cases	7	44	12	39	5	46	17	34	10	41
Mean-R	23.8	40.0	26.1	25.7	26.4	22.0	28.7	20.7	25.6	27.6
Chi-Sq.	7.200		0.006		0.402		3.236		0.135	
d.f.	1		1		1		1		1	
Asymp. Sig.	0.007		0.938		0.526		0.072		0.713	

Industry 1 = natural resources

Industry 2 = food and clothing

Industry 3 = pharmaceuticals and cosmetics

Industry 4 = building materials and equipment

Industry 5 = other industries

Performance:

The proxy for performance in the current study is net profit after tax, and the association of this variable with

MDI is tested using Kendall's rank correlation coefficient (tau). Table 5 shows the results of this test. There is a statistically significant association between net profit after tax and MDI in 2008, but not in 1997. It

is possible that the absence of a statistically significant association in 1997 reflects greater variability of profitability in Jordan in the 1990s, when many companies were adversely affected by the economic and political problems of the region.

Company Age:

Again, Kendall's rank correlation coefficient (tau) is used to the association between the level of mandatory disclosure and company age. Table 5 shows a statistically significant relationship in 2008, but not in 1997. Older companies tend to comply more closely with mandatory disclosure requirements in 2008 than younger companies. This may reflect a degree of corporate learning, but it should be remembered that all companies in the sample were in existence in 1997, so all companies should have had the opportunity to learn at the same rate over the five years between 1997 and 2008.

Multivariate Analysis

Following Wallace and Naser (1995) and Cooke (1998), a rank regression approach was adopted. In this approach, continuous variables are replaced by their ranks. The use of rank regression addresses both the underlying non-normality of distributions of many financial variables, such as capital employed and net profit, and the boundedness and non-normality of disclosure indices. The latter are constrained to take values between 0 and 1, and often exhibit a degree of skew. In principle, this could be negative, where a large number of companies come close to perfect disclosure, or positive, where many companies disclose relatively little but there are a few companies that disclose a considerable amount. Negative skew is more likely to occur in the case of a mandatory disclosure, where the usual expectation is that most companies will disclose all or most items required, but positive skew is more likely to occur in the case of voluntary disclosure, where many companies will disclose little but a few exceptional companies will disclose extensively. Although, as Cooke (1998) notes, the form of the relationships between independent and dependent variables is under-theorised in disclosure index studies, use of regression models is common in the social sciences (Hutcheson and Sofroniou, 1999, p. 57). The initial regression model in the current study is shown in Table 8. It should be noted that a dummy variable has not been included in the model for the 'additional industries' category, to avoid the collinearity problem that would otherwise arise if dummy variables for all five mutually exclusive and exhaustive categories were in the regression.

Table 8: Full regression model

Regression equation:
$\text{RMDI} = \beta_0 + \beta_1 \text{RCE} + \beta_2 \text{RNP} + \beta_3 \text{RCA} + \beta_4 \text{GO} + \beta_5 \text{FO} + \beta_6 \text{NRI} + \beta_7 \text{FCI} + \beta_8 \text{PCI} + \beta_9 \text{BMEI} + e$ β_0, β_i (i = 1 to 9) are the intercept and coefficients respectively, and e is the error term.

Variables:	
RMDI	Rank of Mandatory Disclosure Index
RCE	Rank of Capital Employed
RNP	Rank of Net Profit
RCA	Rank of Company's Age
GO	Government ownership (1 if influential, 0 if not influential)
FO	Foreign ownership (1 if influential, 0 if not influential)
NRI	1 if natural resources industry, 0 otherwise
FCI	1 if food and clothing industry, 0otherwise
PCI	1 if pharmaceuticals and cosmetics industry, 0 otherwise
BMEI	1 if building materials and equipment industry, 0 otherwise

The results of the OLS regression for the full model for 1997 and 2008 are shown in Table 9. Both regression models explain over 70% of the variation in the dependent variable (rank of mandatory disclosure). In both years, the only independent variable whose coefficient can confidently be considered as different from zero is the rank of company age. In other words, controlling for industry, size, performance and ownership structure, there is a tendency for older companies to come closer to full compliance with mandatory disclosure requirements. This is a somewhat stronger result than that given by the univariate regression, though in that case the age in years rather than the rank of age was analysed. In 1997, there are some weak industry effects, but these are absent in 2008.

However, it is plausible to believe that age will be associated with size and performance – older companies are likely to be larger and larger companies are likely to be more profitable. This association may be stronger when actual values are replaced with ranks. The Pearson correlations between the variables RCA and RCE, RCA and RNP, and RCE and RNP are 0.82, 0.77 and 0.99 respectively. Inspection of variance inflation factors (VIF) suggests that there is a potential problem of multicollinearity affecting these three variables. To overcome this problem, Hutcheson and Sofroniou (1999) suggest using a reduced regression approach, where all but one of the highly correlated variables are omitted from the full regression model. Therefore three reduced regression models have been established for both years, including only one of the three variables RCE, RNP and

RCA in turn. The results of the reduced regressions are also summarised in Table 9.

Table 9: Multivariate regression results

	1997				2008			
Model	**Full**	**RCE only**	**RNP only**	**RCA only**	**Full**	**RCE only**	**RNP only**	**RCA only**
Intercept	0.719***	0.842***	0.830***	0.732***	0.697***	0.808***	0.818***	0.714***
	(32.851)	(25.383)	(28.583)	(34.848)	(33.424)	(34.626)	(34.016)	(37.357)
RCE	−0.001	−0.001			0.002	0.003***		
	(1.393)	(0.676)			(0.618)	(4.985)		
RNP	−0.007*		0.015***		−0.014		0.013***	
	(1.913)		(3.619)		(0.994)		(4.343)	
RCA	0.008***			0.006***	0.006***			0.005***
	(8.748)			(10.030)	(6.693)			(10.524)
GO	0.030	0.031	0.016	0.025	0.041*	0.020	0.016	0.041*
	(1.253)	(0.691)	(0.418)	(1.007)	(1.763)	(0.550)	(0.417)	(1.715)
FO	0.021	0.041	0.029	0.016	0.009	0.011	0.013	0.012
	(1.205)	(1.254)	(1.031)	(0.918)	(0.671)	(0.579)	(0.608)	(0.879)
NRI	0.018	−0.022	−0.051	−0.022	−0.030	−0.040	−0.038	−0.032
	(0.462)	(0.305)	(1.071)	(0.736)	(1.225)	(1.094)	(0.990)	(1.312)
FCI	0.017	0.018	−0.007	0.007	0.017	0.003	0.004	0.013
	(0.671)	(0.400)	(0.164)	(0.273)	(0.924)	(0.096)	(0.145)	(0.664)
PCI	−0.030	−0.098*	−0.093*	−0.040	−0.027	−0.069	−0.073*	−0.033
	(0.972)	(1.743)	(1.891)	(1.280)	(1.114)	(1.874)	(1.908)	(1.326)
BMEI	0.006	−0.012	−0.019	0.000	0.010	−0.010	−0.012	0.005
	(0.286)	(0.287)	(0.531)	(0.002)	(0.559)	(0.364)	(0.436)	(0.265)
Adjusted R^2	0.728	0.029	0.248	0.706	0.729	0.359	0.296	0.717

t-statistics (signs suppressed) are given in parentheses

* Significant at 0.1 level

** Significant at 0.05 level

*** Significant at 0.01 level

These regressions suggest that neither industry nor ownership add significant explanatory power to the ranks of company age, size and performance. In both full models, rank of company age is the only significant variable, and this is confirmed by the reduced regressions omitting rank of capital employed and rank

of net profit. The two sets of reduced regressions omitting rank of company age have comparatively low explanatory power, as measured by Adjusted R^2. This raises the issue of why company age could be associated with disclosure levels. A possible explanation is that age is proxying for familiarity with disclosure requirements. In their research in Egypt, Abd-Elsalam and Weetman (2003) found a lower degree of compliance with less familiar IASs. It may be the case in Jordan that older companies (as well as tending to be larger and more profitable companies) have developed greater experience in applying not only IASs but also other disclosure regulations.

DISCUSSION AND CONCLUSIONS

This paper sought to investigate the effect of factors influencing the accounting system in countries on the Jordanian context. In 1998, due to the need of attracting foreign investors with specific expectations relating to financial disclosure and due to the internal pressures of governmental bodies, the Jordanian accounting system switched from locally developed disclosure rules to an internationally renowned and widely adopted system, the IAS/IFRS. The paper then set out to investigate how well Jordanian manufacturing companies had indeed adopted those imposed changes in the financial statements and whether these changes had indeed led to a change in financial disclosure comparing before and after the adoption of IAS/IFRS.

To that end, we have compared the extent of listed Jordanian manufacturing companies' compliance with mandatory disclosure requirements before and after these changes. We found that, in 1997, companies disclosed on average about three-quarters of items required by IAS, though there were some companies that disclosed more fully. In 2008, compliance with disclosure requirements of IAS had actually improved,

though there were still significant omissions on the part of some companies. Curiously, the level of compliance with JSC requirements was lower, though these were specified directly rather than indirectly. Many of the JSC requirements call for discursive disclosures rather than for quantified information, and it may be more difficult for companies in a less sophisticated economy to provide clear (or indeed any) discursive information relating to the more complex or uncertain aspects of the business. Overall, however, there was little change in the level of mandatory disclosure, especially when this was measured by the disclosure index.

It is interesting to compare the results of the current research with earlier studies on the topic of disclosure in Jordan. Solas (1994) measured the level of financial disclosure of Jordanian listed companies' annual reports before 1990, in which year the JACPA suggested that listed companies should follow IASs. Solas employed a disclosure index based on 31 items collected from IAS1 and IAS5, and he applied this index to the annual reports of 45 Jordanian manufacturing and service companies for the year ended 31 December 1988. Solas obtained a mean disclosure index of 46.35%, which he considered to be unacceptably low. Mutter (1993, in Arabic) assessed the extent of companies' compliance with IASs by examining the financial statements of 30 Jordanian companies from different industry sectors listed on AFM for the year ended 31 December 1990. He showed that Jordanian companies attained what he considered to be a minimum acceptable level of compliance with IAS disclosure requirements, the average disclosure levels reaching about 80%. Abu-Nassar (1993) applied an overall disclosure index, including both mandatory and voluntary items, to the financial reports of 96 companies listed on the AFM between 1981 and 1990. He found that the level of disclosure in Jordanian companies' annual reports had improved significantly during that

period.

Suwaidan (1997) applied a voluntary disclosure index to the annual reports of 102 companies listed on the AFM at the end of 1992, though he did not specifically provide evidence on mandatory disclosure levels. Naser (1998) examined a sample of 54 companies listed on the AFM in 1994, and found a mean overall disclosure level of 63%. Al-Akra et al. (2010a) examined the effects of privatisation, changes in mandatory disclosure requirements and governance mandates on the levels of disclosure. They employed an unweighted disclosure index, on a sample of 80 non-financial, listed companies comparing disclosure in 1996 and 2004. They found that disclosure had significantly improved in 2004, mean disclosure level of 79%, compared to 55% in 1996. They attributed this in part to the mandatory auditing committee but also board size and auditor type have a positive effect. Finally, most recently, Omar and Simon (2011) investigated mandatory and voluntary, referred to as aggregate, disclosures in Jordan after the regulatory changes. Their univariate and multivariate analyses showed for example firm size, company age and industry type to be significantly associated with the level of aggregate disclosure. They found that aggregate levels had increased in comparison to prior studies, and that mandatory disclosure was at 83% and voluntary disclosure was at 34%.

We also investigated possible explanations for the variation in mandatory disclosure levels. Univariate analyses suggest that company size is associated with level of disclosure – larger companies are more likely to comply with requirements. There is also a slight industry effect in that companies in the natural resources sector tend to comply more effectively with disclosure requirements. In 2008, substantial foreign ownership was also associated with higher compliance. These

findings are not always consistent with comparable results of previous studies. For example, Solas (1994) found no significant association between the level of mandatory disclosure and any company characteristics (which included size measured in terms of total assets, rate of return, number of shareholders, and earnings margin). On the other hand, Abu-Nassar (1993) found that inadequate levels of financial disclosure were associated with smaller, younger and less profitable companies.[vi] Suwaidan (1997) studied voluntary disclosure by Jordanian companies, so the results of this earlier study are not directly comparable to those of the present research. He found significant positive relationships between the level of voluntary disclosure and company size, industry type, number of shareholders, government ownership, size of auditing company, international contact of auditing company, and frequency of external financing, while he found negative relationships with profitability and institutional ownership ratio. However, the multivariate analysis showed a negative relationship between the level of voluntary disclosure and number of shareholders, audit company international contact, profitability and the external financing ratio, and a positive relationship with other variables. Suwaidan concluded that company size was the best variable for explaining the variation in the level of voluntary disclosure. Finally, Naser (1998) found that comprehensiveness of disclosure was positively associated with company size and profitability, while Naser and Al-Khatib (2000) found significant positive relationships between the depth of voluntary disclosure and company size and profit margins.

Overall, therefore, the dominant explanation for variation in disclosure is simply company size, and our results are not inconsistent with this (though in our multivariate analysis, which used ranks rather than

actual values for the dependent and various independent variables, we found that company age was a more powerful explanatory factor). The implications of our results are that Jordanian listed manufacturing companies still have some way to go in attaining full compliance with mandatory requirements. This is particularly important in the context of the requirement to follow IASs – though we observed some improvement between 1997 and 2008, there are still gaps in compliance on the part of some companies. Our mandatory index concentrated on the more generic disclosure requirements of IAS1 and IAS5, and did not attempt to cover the specific disclosures embedded in standards addressing particular accounting issues. Hence, we would have expected virtually full compliance, and the less than full compliance observed could be interpreted as evidence of 'IAS lite' regarding mandatory disclosure practice in Jordan. Our evidence could be of interest to other developing countries, who want to improve the quality of their mandatory disclosures practices.

This paper makes several contributions to accounting research, and mandatory disclosure practice. It fills a gap in accounting research by providing evidence on IAS-lite in Jordan, as a developing country, which has not been provided in the literature so far. This evidence emphasises the importance of the theoretical argument of Roberts *et al.* (1998), and Gray (1988) in Figure 1, regarding the adoption of IAS/IFRS in developing countries. As is very clear from their argument, the external and internal influences will impact on the accounting and disclosure practices at differing levels, particularly regarding the adoption of IAS/IFRS in different countries around the world.

However, what do our findings say about the factors influencing accounting? The findings of this paper support the fact that Al-Akra et al.'s (2009) findings on

cultural, legal, societal factors influencing adoption of IAS/IFRS can also have an effect on compliance. While the system is very open to foreign influences, compliance is not at its ultimate level. It is possible that investor expectations and governmental pressures can enforce the change but cannot enforce full disclosure levels. Lack of know-how, lack of financial funds, economic situation in general and societal factors may influence the adjustment to these changes in the accounting system.

One could argue that a failure should not be but can be expected as developing countries might lack know-how, financial resources, and enforcement task forces. In the Jordanian context, regional foreign investment has not been deterred but one should expect a continuous increase in compliance if investors are also to be attracted from the US and Europe. This suggests a further investigation in the future in order to determine whether compliance levels have increased, ideally also in the wider regional context. One of this paper's limitations is its focus on the Jordanian context but this paper is understood as a contribution to the body of developing countries' studies regarding financial disclosure by adding the Jordanian context.

The findings of this paper are expected to help foreign investors to understand the actual status of IAS adoption in developing countries. They should also provide a clear message to international professional bodies and auditors to review the accounting and auditing standards to be more suitable for developing countries as a 'light version'. In a similar vein, the International Accounting Standards Board (IASB) has recently issued a "cut down" version of IFRS for smaller, non-quoted companies. This could be of particular relevance for developing countries, without a majority in traded companies, in enhancing financial reporting's practices. In a market where users' needs are

primarily focussed on non-traded companies, these needs should be considered without an excessive focus on the needs of a minority of stakeholders that relate only to traded companies. Given the factors influencing financial reporting environments (see Figure 1) it might be most appropriate for developing countries to consider a lighter version of IAS, i.e. using current practice to transform into standards, passed by the IASB, that could be complied with, rather than accepting bad practice and non-compliance from the outset.

NOTEs

1. Following the conversion of the International Accounting Standards Committee into the International Accounting Standards Board in 2002, IASs were succeeded by International Financial Reporting Standards (IFRS). In this paper, IAS is used throughout, and includes IFRS where appropriate.

2. Marston and Shrives (1991) review earlier research using disclosure indices.

3. Some studies give a half-score where an item on the checklist is only partly disclosed, but this involves the researcher judging whether a half-score is appropriate. Often, half-scores can be avoided by splitting an item into various sub-items.

4. IAS 5 (Information to be Disclosed in Financial Statements) was combined with IAS 1 (Disclosure of Accounting Policies) in the 1997 revision of IAS 1 (Presentation of Financial Statements), which was effective for periods beginning on or after 1 July 1998. IAS 7 (Cash Flow Statements) had last been revised in 1992.

5. This list included the statutory requirements to publish an auditor's report and a directors' report.

6. Abu-Nassar (1993) found that companies in the insurance sector tended to comply more effectively, but as this sector was excluded from the present study, no comparison is possible.

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