Determinants of revenue recognition disclosures: the case of Jordanian industrial listed companies

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Abstract: The focus of this study is on the extent to which IAS 18 is applied by Jordanian industrial companies. Specifically, the objectives of this study are: 1) to investigate the extent of application of IAS 18 in selected Jordanian industrial companies listed on the Amman Stock Exchange (ASE); 2) to investigate the impact of certain corporate characteristics such as company size, profitability, liquidity, leverage, listed status and ownership on the application of IAS 18 among Jordanian industrial companies. To achieve these objectives, an index comprising of 15 items were employed to study disclosures by 40 industrial companies listed on the ASE. It was found that, on average, the companies published information on approximately 56% of the items included in the index; only 13 companies achieved high disclosure scores however. These results indicate that there is significant scope for additional disclosures under IAS 18 by Jordanian industrial companies listed on the ASE. The results also suggest that company size is significantly and positively associated with the application of IAS 18. The analysis also documents that liquidity as well as leverage are significantly and negatively associated with the application of IAS 18, while profitability is not significantly associated with the level of disclosures under IAS 18.

Keywords: revenue recognition; revenue disclosure; Jordan; Amman stock exchange; ASE; industrial.


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1 Introduction

Globalisation of financial markets has led to the need for international standards in order to improve comparability and understanding among financial reports (Basoglu and Goma, 2001). Before international accounting standards (IASs) were widely adopted, “most countries had developed their own national accounting standards in an effort … [to get companies to produce] comparable financial information and to develop reliable accounting information databases in order to aid investors and other users of information in making decisions. In some countries professional bodies formulated financial accounting standards, while in other countries governments and regulators establish these standards” [Basoglu and Goma, (2001), p.3]. However, this situation changed in 2005 when a large number of countries abandoned their national standards in favour of IASs for large listed companies.

IASs were issued by the Board of the International Accounting Standards Committee (IASC) between 1973 and 2000 however, since 2001 these international financial reporting standards (IFRS) as well as IASs have been issued by the International Accounting Standards Board (IASB). Many countries require the financial statements of publicly-traded companies to be prepared in accordance with IASs. Since 2008, there has been a widespread adoption of IASB standards on a mandatory basis (Al-Shammari et al., 2008). As a result, it is argued that the international comparability of financial reporting has improved over the recent years; especially with auditors and enforcement bodies encouraging compliance (JSC, 2002; Schipper, 2005). IASs were informally adopted by the Jordanian Association of Certified Public Accountants (JACPA) in 1989. However, companies were not compelled to prepare their financial statements in accordance with these standards. However, this changed in October 1997 after Jordanian legislation required companies to adopted IAS when preparing their financial accounts. Later, the Amman Securities Exchange (ASE) mandated that all the listed companies use IAS.

This study investigates the extent to which IAS 18 is applied among Jordanian industrial companies. Specifically this study examines the level of compliance (full or partial) with IAS 18 by Jordanian industrial companies listed on the ASE. It also attempts to identify any significant relationship between certain corporate characteristics such as the size, profitability, liquidity, leverage, listing status and ownership structure of company and the extent of compliance with IAS 18.

The remainder of the paper is organised as follows. Section 2 discusses the regulatory framework governing corporate disclosure in Jordan. Section 3 presents a review of the
literature. The research design is described in Section 4 while Section 5 outlines the results. Finally, conclusions, policy implications and directions for future research are provided in Section 6.

2 The Jordanian financial reporting framework

The legal framework underpinning financial reporting within Jordan is based on a number of company laws that date back to the 1960s as well as stock exchange listing requirements which were introduced in 1978. For example, in 1966 the Jordanian Ministry of Industry and Trade issued Commercial Law (Trade Law No. 12) which required companies to keep records of their financial activities. This law specified that all companies had to keep three main books: a general journal, inventory records and a correspondence register. However, the law was not specific about the content and format of information to be contained in these books (Al-Akra et al., 2009, 2010a; Mardini et al., 2013; Mardini, 2015). A number of additional laws were subsequently issued by the Ministry of Industry and Trade in order to assist with the development of the Jordan economy. As a result of these laws, many foreign companies and businesses shifted their operations to Jordan and relocated their regional headquarters to the capital city of Amman (Haddad, 2005). This, in turn, prompted the Central Bank of Jordan to set up the Amman Financial Market in 1978. The only disclosure requirement of the stock market at that time was that listed public companies should provide the Amman Financial Market with audited financial statements (Piro, 1998).

Under the Auditing Profession Practice Law No. 3² of 19852, JACPA was established as a local professional accounting body. However, no local accounting standards were created for them to apply. Therefore, JACPA played an important role in facilitating the adoption of IASs and recommended that all Jordanian companies voluntarily adopt IAS/IFRS effective from January 1990. However, JACPA were unable to force listed companies to comply with their recommendation (Suwaidan, 1997). The absence of any legal or professional requirement to implement IASs remained until 1997 and allowed firms to choose whichever Generally Accepted Accounting Principles (GAAP) they wanted to adopt³.

In the late 1990s, the government implemented a reform program, which promoted privatisation procedures⁴ and developed a new Jordanian Capital Market (JCM). As part of this reform program, a Securities Law was introduced in 1997⁵; this legislation stated that entities supervised by the Jordanian Securities Commission (JSC) were required to publish annual audited financial statements that were prepared in accordance with IASs issued by the IASB; the wide range of GAAP choices that had previously been afforded were thus eliminated⁶. Since 1997, therefore, Jordanian listed companies have used IASs and become familiar with the standards issued by the IASB.

3 Literature review and hypothesis development

3.1 Literature review

Revenue can be defined in many ways. According to Epstein and Mizra (2003, p.270), “a gross inflow of economic benefits resulting from an enterprise’s ordinary activities is
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considered revenue, provided those inflows result in increases in equity, other than increases relating to contributions from owners or equity participants". Megis et al. (2000, p.7) defined revenue as “an inflow of assets from providing goods and services to customers including sales made for cash and sales made on credit”. They suggested that if only cash sales are considered, revenue reporting would not run the risk of misleading investors.

However, the accrual concept allows companies to book revenue before receiving cash. So there are two conditions that must be met (website: Harper, 2005). Firstly, the critical earnings event must have been completed (for example, a service must have been provided or product delivered); and secondly the payment must be measurable in its amount, agreed upon with the buyer, and its ultimate receipt must be reasonably assured. For some companies, recording revenues is relatively straightforward but for others it is a more difficult task. Many companies that have restated their revenues in the past have sold products or services where the timing of cash receipts has been open to question. In other words, the sales of these companies have often involved long-term service contracts (making it difficult to determine how much revenue should be counted in the current period when the service is not yet fully completed).

This topic of Revenue recognition is the focus of IAS 18. Revenue recognition can be defined as a “firm’s earnings process which often takes place over an extended period of time” [Megis et al., (2000), p.70]. Nobes and Parker (2002, p.77) have argued that “IAS 18 prescribes the accounting treatment for revenue arising from certain types of transactions and events and, while useful, is not comprehensive … on the characteristics of all the diverse forms of revenue and of possible recognition strategies that could be encountered”. The basic premise is that revenue should be measured at the fair value of the consideration that has been received when the product or service promised has been provided to the customer. Specific guidance applies to various categories of revenues. Thus, in the normal sale of goods, revenue is presumed to have been realised when the significant risks and rewards have been transferred to the buyer, accompanied by the forfeiture of effective control by the seller, and the amount to be received can be reliably measured [Epstein and Mirza, (2003), p.271].

Many studies have examined the impact of IASs in general and IAS 18 (revenue recognition) in particular. The methodologies of these studies and the results obtained have been helpful when conducting the research in this particular study. One such study was conducted by Wallace et al. (1994), where the main objective was to construct an index of comprehensive disclosures for selected mandatory items as a proxy for disclosure quality among a sample of Spanish firms and to relate the measure of disclosure quality to firm characteristics. For this purpose the study used the Lang and Lundholm’s (1993) index, and related the index values obtained to three non-mutually exclusive categories of characteristic variables: structure related, performance related and market related variables. The study concluded that the associations between the disclosure index and firm size (as represented by asset or sales) as well as listing status were significantly positive in Spain. However, the association between the index and liquidity was significantly negative and at variance with the results from prior studies.

Subsequent work by Al-Juhmani (1998) examined the effect of IASs on the reports of firms listed on the Amman stock exchange (ASE) in the year 1990–1991. The study used the extracted data from samples of Jordanian companies that adopted IASs as an experimental group. The study concluded that the adoption of IASs did not increase the
information content of a firm’s financial statements but did affect share prices prior to the release of its accounts.

Ashbaugh and Pincus (2000) investigated the impact of differences in countries’ accounting standards relative to IAS on the accuracy of financial analyst earnings forecasts for a sample of non-US firms before and after they adopted IAS. They developed three indexes that reflected differences in countries’ measurements and disclosure policies relative to IAS. The authors documented that their indexes were positively associated with analyst earnings forecast errors; Ashbaugh and Pincus (2000) found that analyst forecast errors were larger in countries where standards diverged most from IASs. They concluded that prior to adopting IAS, the extent of differences in countries’ disclosure and measurement policies relative to IAS were positively associated with analysts’ earnings forecast errors. They also documented a decrease in the absolute value of analyst forecast errors after firms adopted IASs.

Hung and Subramanyam (2004) examined the effects of IAS adoption on the financial statements of European countries with stakeholder-oriented accounting systems; they analysed data for a sample of 80 German firms that adopted IAS for the first time during 1998–2002. Specifically, they investigated the effects of IAS adoption on the financial statements by documenting the financial statement changes predicated by the move to IASs, the effects of these changes on key financial ratios and the value relevance of financial statement information around the transition date. They concluded that total assets and the book value of equity, as well as the variability of book value and net income, were significantly higher under IAS.

Suwaidan et al. (2004) evaluated social responsibility disclosure practices by studying the annual reports of Jordanian industrial companies. An indexing procedure was used to measure and evaluate the disclosure of social responsibility information in the annual reports of Jordanian industrial companies listed the ASE. The index was tested against a sample of corporate annual reports to find out the problems that could arise from its application and whether it needed further refinement. The final list of variables included in the index involved 37 items of social responsibility information. The study concluded that there was scope for additional social responsibility disclosures in the annual reports of Jordanian listed industrial companies.

Al-Sharari (2005) built upon Suwaidan et al.’s findings; he examined the impact of adopting IASs in Jordan by studying three dimensions (namely, social, economic and political) from the perspective of accountants, auditors and academics. A survey was used to gather information from these three groups. Al-Sharari, concluded that the adoption of IASs by Jordanian companies had impacts that were ranked as follows; economic impacts were rated first, political impacts second and social impacts last.

Wustemann and Kierzek (2005) investigated the probability and reliability of measurements concerning the inflow of future economic benefits associated with different revenue-generating transactions and events. The study discussed three alternative conceptual models of revenue recognition that were built on the asset and liability view of financial statements –

1. the asset and liability fair value approach that has been explored by the Financial Accounting Standards Board (FASB) and the IASB between 2002 and 2004
2. the asset and liability performance value approach that the FASB has been investigating since May 2005
The study concluded that the general recognition criteria in the IASB’s framework, give rise to different probabilities and reliability measures for the inflow of future economic benefits depending upon the revenue-generating transactions involved.

Caylor (2007) examined deferred revenue and accounts receivable to see if discretion over revenue recognition was used to avoid negative earnings surprises. He developed two theories which predicted that discretion over deferred revenue would be preferred to changes in accounts receivable for this purpose. Data were obtained on annual earnings, short-term deferred revenue, accounts receivable, sales, total assets, cash flow from operations and other financial statement measures from the 2005 annual reports of x companies. The study concluded that managers accelerated the recognition of revenue using both variables (deferred revenue and accounts receivable) when pre-managed earnings missed the analyst benchmark for a firm’s performance by a small amount.

The current article covers two new points that, to the best of the researcher’s knowledge, have not been addressed in previous studies. Firstly, it examines the extent to which the requirements of IAS 18 have been complied with by Jordanian industrial companies; data for a sample of first and the second market companies from the ASE are analysed. Secondly, it measures the factors which influence compliance with IAS 18 using a multiple regression model.

### 3.2 Hypothesis development

This study seeks to measure compliance with the requirements of IAS 18 among Jordanian industrial companies. Specifically, the objectives of this study are:

1. to investigate the extent to which the requirements of IAS 18 are disclosed in the financial statements of selected Jordanian industrial companies listed on the ASE
2. to examine the impact of certain corporate characteristics such as company size, profitability, liquidity, leverage, listing status and ownership on the extent of compliance with IAS 18 by Jordanian industrial companies; a disclosure index method is employed.

From a discussion of the prior literature, a number of hypotheses were developed. These hypotheses are

1. there is a significant positive relationship between the implementation of IAS 18 and a company’s:
   a. size
   b. profitability
   c. listing status.

By contrast, it is argued that there is a significant negative association between the implementation of IAS 18 and a company’s

a. liquidity
b. leverage
c. domestic-foreign ownership levels.
A further discussion of these hypotheses is contained in Section 5.2.

According to the prior studies, these company characteristics can be represented by the following factors or ratios: company size can be measured by the total assets for the fiscal year 2010 (Palmer, 2006; Suwaidan et al., 2004; Al-Shammari et al., 2008; Wallace et al., 1994); profitability can be proxied for by the return on equity ratio for the fiscal year 2005 (Palmer, 2006); liquidity can be represented by the current ratio for the fiscal year 2010 (Wallace et al., 1994; Al-Shammari et al., 2008); leverage is calculated as the total debt to total asset ratio for the fiscal year 2010 (Al-Shammari et al., 2008; Palmer, 2006); listed status refers to a dummy variable which takes on a value of if the company is listed on the first market, and a value of zero if the company is listed on the second market (Wallace et al., 1994); domestic-foreign ownership is measured by a variable which takes a value of two if it is: a domestic owned company and a score of one if it is foreign owned (Al-Shammari et al., 2008).

4 Methodology

4.1 Sample

The population of the study were the industrial companies listed on the first and the second market of the ASE (on December 31, 2010). Some 37 companies in the first market and 48 in the second market satisfied this criterion. Two companies in the first market were eliminated because one of them was in the process of liquidation, while the second was misclassified since its activities related to investments. In the second market, eight companies were eliminated because they were in the process of liquidation. After this elimination process, the population for the study was 35 companies in the first market and 40 companies in the second market.

A judgmental random sample of 20 companies was selected from the first market, and 20 companies from the second market populations. Therefore, the total sample consisted of 40 companies from both markets. The sample represents (57%) and (50%) of first market companies and second market companies, respectively. The major reason for selecting 2010 was that there were no major fluctuations in company stock prices during this year because of an economic crisis. Additionally, the researcher intended to measure the extent to which the IAS 18 was complied with ten years after the official adoption of IASs within the country.

4.2 The regression model

This study investigates the extent of which IAS 18 is applied by Jordanian industrial companies. Specifically this study assesses the level of compliance (fully or partial) with IAS 18 by Jordanian industrial companies listed on the ASE. It also identifies any significant relationship between certain corporate characteristics (such as company size, profitability, liquidity, leverage, listing status and ownership) and the extent of any compliance with IAS 18 among Jordanian industrial companies. Thus, the following variables were examined in this study:

a IAS items: the total scores from the application of IAS 18

b explanatory variables.
A list of the IAS 18 items included in the index is shown in Appendix. The use of an index requires such a list of the items from IAS 18 that one would expect to be reported by Jordanian industrial companies in their annual reports. The index score depends on the number of items stipulated in IAS 18 that were disclosed; any relevant item published receive a value of one (1) otherwise a zero (0) was recorded. The actual number of items from the index list disclosed by each company was then expressed as a percentage with the minimum being 0% and the maximum 100% (Wallace et al., 1994; Suwaidan et al., 2004; Al-Shammari et al., 2008).

The following multiple regression model was then developed to test the second hypothesis:

$$\text{AIAS18} = \beta_0 + \beta_1 \text{CS} + \beta_2 \text{PRO} + \beta_3 \text{LIQ} + \beta_4 \text{LEV} + \beta_5 \text{LC} + \beta_6 \text{DFO}$$

where AIAS 18 is the IAS 18 score; $p$ is the regression constant item; CS is the company size (total assets); PRO is the profitability measure (return on equity) calculated as the net income divided by the outstanding shareholders’ equity; LIQ is the liquidity measure (current ratio) calculated as the total current assets divided by the total current liabilities; LEV is the leverage value (debt ratio) measured as total liabilities ÷ total assets; LC refers to listing conditions; and DFO is the domestic-foreign ownership of companies.

## 5 Results and discussion

### 5.1 Descriptive statistics

The study sample consisted of (40) industrial companies drawn from the first and the second markets of the ASE. The index included 15 items of information IAS 18. Table 1 shows a summary of the companies’ index scores.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td>40</td>
<td>6.667</td>
<td>100</td>
<td>56.833</td>
<td>24.060</td>
</tr>
<tr>
<td>First market</td>
<td>20</td>
<td>20.000</td>
<td>100</td>
<td>61.334</td>
<td>21.802</td>
</tr>
<tr>
<td>Second market</td>
<td>20</td>
<td>6.667</td>
<td>93.333</td>
<td>52.333</td>
<td>25.890</td>
</tr>
</tbody>
</table>

From Table 1, it is apparent that the lowest and highest scores were 6.667% and 100%, respectively. On average, the companies supplied 56.833% of the items included in the index. Table 2 shows the index results for the sample companies split according to whether compliance with IAS 18 was low, moderate or high.

<table>
<thead>
<tr>
<th>Level of disclosure</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>11</td>
<td>27.5%</td>
</tr>
<tr>
<td>Moderate</td>
<td>16</td>
<td>40.0%</td>
</tr>
<tr>
<td>High</td>
<td>13</td>
<td>32.5%</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100%</td>
</tr>
</tbody>
</table>
According to Table 2, only 13 out of 40 companies (32.5%) received a high level of compliance score 16 companies (40.0%) received a moderate score and 11 companies (27.5%) received a low index score. The results in Tables 1 and 2 suggest that there is considerable variation in the application of IAS 18. These findings are similar to the results of Suwaidan et al. (2004) in their study of social responsibility disclosure. They found that only three out of 65 companies received disclosure scores of more than 30%; they classified these three companies as high disclosure firms while, 55 companies had low levels of disclosure i.e. less than or equal to 10%.

Descriptive statistics for the explanatory variables used in the study are shown in Table 3; these variables are used to investigate the extent to which compliance with IAS 18 varies with Jordanian company characteristics:

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company size (log)</td>
<td>40</td>
<td>2.820</td>
<td>8.414</td>
<td>3.371</td>
<td>5.077</td>
</tr>
<tr>
<td>Profitability (return on equity)</td>
<td>40</td>
<td>-35.080</td>
<td>108.49</td>
<td>5.521</td>
<td>22.400</td>
</tr>
<tr>
<td>Liquidity (current ratio)</td>
<td>40</td>
<td>0.110</td>
<td>10.530</td>
<td>3.290</td>
<td>2.640</td>
</tr>
<tr>
<td>Leverage (debt ratio)</td>
<td>40</td>
<td>0.030</td>
<td>1.07</td>
<td>0.294</td>
<td>0.218</td>
</tr>
<tr>
<td>Listing status</td>
<td>40</td>
<td>0</td>
<td>1</td>
<td>0.500</td>
<td>0.500</td>
</tr>
<tr>
<td>Ownership of companies</td>
<td>40</td>
<td>1</td>
<td>2</td>
<td>1.830</td>
<td>0.380</td>
</tr>
</tbody>
</table>

It is clear from Table 3 that there is great deal of variation in the company characteristics among the sample firms; the gap between the lowest and highest values of each explanatory variable is sizeable and there is a big difference between the mean and the standard deviation values reported. Such a result is not surprising since the population for the study was the industrial companies of the first and the second market. So there were small and large companies included in the sample. For example, the highest value of the company size variable was for the ‘Arab Potash’ company which is one of the biggest first market companies in Jordan. The lowest value was for the ‘Industrial Industries and Match Company’ from the second market; this company reported a net loss for the years 2006, 2007 and 2008 and they reduced their capital over the last couple of years. In fact, most of the companies in the sample experienced losses that influenced their profitability measures. For example, the highest value of the profitability variable was for the National Multi Engineering Industries Company in the second market. Because of its exceptional profitability, the company changed its accounting policies in 2010. It is the only company to have reached a profitability ratio of over 100%. The other companies of the sample study did not report a profitability ratio of more than 32% with most of them achieving negative percentages.

5.2 The regression results

This section reports the results from testing the hypotheses using regression analysis. An attempt is made to examine the impact of the independent variables in explaining variations in the companies’ overall index score for compliance with IAS 18. In other words, the regression investigates the impact of the selected corporate characteristics such as company size, profitability, liquidity, leverage, listing conditions and ownership on the extent of compliance with IAS 18 among Jordanian industrial companies. Table 4
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shows the results of model (1) and documents the statistical relationships between the independent variables and the dependent variable (the IAS 18 index).

Table 4  Regression analysis (model 1)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R square</th>
<th>Adjusted R square</th>
<th>Std. error of the estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.473</td>
<td>0.224</td>
<td>0.083</td>
<td>23.044</td>
</tr>
</tbody>
</table>

As Table 4 indicates, the value of the $R^2$ statistics 0.083 is, which means that changes in the independent variables (company size, profitability, liquidity, leverage, listing status ownership) explain just over 8% of the changes in the dependent variable; of course 91.7% of the changes in the dependent variable remain unexplained by this model.

An analysis of the data in the table reveals that none of the six independent variables have any statistical relationship with the dependent variable. As a result, the researcher decided to omit those variables that had fixed values: the listing status and the ownership variable were dropped. Such an approach was not novel. Prior studies (Ashbaugh and Pincus, 2000; Suwaidan et al., 2004; Palmer, 2006) have increased or decreased the number of explanatory variables examined in order to arrive at an optimal model that improves the $R^2$. This study followed a similar approach when arriving at model (2).

When the two variables were removed, model (2) was expressed as follows:

$$ \text{AIAS18} = \alpha_0 + \alpha_1 \text{CS} + \alpha_2 \text{PRO} + \alpha_3 \text{LIQ} + \alpha_4 \text{LEV} $$

where AIAS 18: application of IAS 18 score; $\alpha_0$ is the regression constant for model (2) and all the other variables remain as previously defined.

Table 5 shows the results of model (2) for the statistical relationship between the independent variables and the dependent variable (of IAS 18 index score).

Table 5  Regression analysis (model 2)

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R square</th>
<th>Adjusted R square</th>
<th>Std. error of the estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0.458</td>
<td>0.21</td>
<td>0.119</td>
<td>22.579</td>
</tr>
</tbody>
</table>

From Table 5, it is apparent that the adjusted $R^2$ value of 0.119 has increased; this means that the fit of the model has improved.

According to the results there is a positive relationship between compliance with IAS 18 and company size indicating that the larger the company, the greater the company’s score for IAS 18. The level of significance of the relationship between the two variables is 0.035 which is less than the critical value of 0.05 indicating that there is a significant statistical relationship between the two variables.

Thus, the hypothesis that there is a significant positive relationship between the application of IAS 18 and the company’s size is confirmed.

According to IAS 18, the revenues to be recognised are expected to increase as a company uses more of it is total assets. This could increase amounts in current assets such as cash, receivables and other assets, and increase total assets at the same time. It could be concluded that the larger the total assets of the company the greater the amount of revenue-inflows from the assets of that company. The results are consistent with previous studies regarding company size in Spain (Wallace et al., 1994), in Jordan (Suwaidan et al., 2004), in GCC countries (Al-Shammari et al., 2008) and in Australia (Palmer, 2006). Thus, company size has the same effect on compliance with IAS 18 in Jordan as it has in other countries. Although the company size (total asset) has a small
association with the IAS18 index score, hypothesis 1 is accepted at the 0.05 level of significance.

Moreover, there is a positive relationship between the application of a company’s IAS 18 score and its profitability (return on equity). This result would suggest that the higher profitability (return on equity) which a company achieves, the greater its compliance with the standard. However, the p-value for the relationship between the two variables was 0.946, which suggests that this positive association is not significantly different from zero.

Thus, there is no support for the second hypothesis of a significant positive relationship between compliance with IAS 18 and a company’s profitability.

Therefore, profitability does not seem to influence a company’s IAS 18 index score. This may have been due to a company not being able to control the operating expenses in the fiscal year under IAS 18 or the existence of non-operating revenues, profits and expenses that the company did not measure or recognise under IAS 18. This study assumed (like Palmer, 2006) that the profitability is a measure of management performance, and that the manager of a profitable company is more likely to apply an international standard. Conversely, a company that is less profitable may be less likely to apply an international standard in an attempt to cover up the reasons for declining profits (Palmer, 2006). But this assumption is not supported, as the current investigation cannot find a significant statistical relationship. The results for the profitability variable reported here are consistent with the findings of Palmer (2006) in Australia.

Furthermore, there is a negative relationship between the IAS 18 index scores and the liquidity (current ratio). This suggests that the higher the liquidity, the lower a company’s compliance with IAS 18. The level of significance of the relationship between the two variables as measured by the p-value (0.048) was less than the critical value of 0.05 suggesting that the null hypothesis of no relationship could be rejected. The hypothesis for this variable was therefore supported.

IAS 18 recognises revenue from the ordinary operating activities of an enterprise such as the sale of goods, the sale of services, interest, royalties, and dividends. The transactions associated with these activities mainly involve cash and receivables which are the two major components of liquidity. Since that the liquidity has an effect (–3.728), the results suggest that the application of IAS 18 varied from one company to another depending on it is liquidity. The results of the liquidity variable are consistent with the Spanish findings of Wallace et al. (1994) but inconsistent with the GCC results of Al-Shammari et al. (2008). In fact, Al-Shammari et al. (2008) found a positive relationship between the two variables overall the GCC countries – although they did note differences between the various countries that make up the GCC. The findings of the current study for the liquidity variable are consistent with their results for Saudi Arabia, Qatar and Bahrain. The results differ in relation to Kuwait, Oman and UAE. Therefore the liquidity effect associated with IAS 18 may vary from one country to another.

There is a negative relationship between the index score of IAS 18 and a company’s leverage (total debt to total asset). This suggests that the higher a firm’s leverage, the lower its compliance with IAS 18. The p-value for the relationship between the two variables was (0.035) which was again less than the critical level of 0.05 suggesting that a significant association exists between the two variables.

Since leverage (debt) has a strong negative association with IAS 18 one might conclude that a company with a large amount of debt would try to service its borrowings through the revenues it reports and this will impact negatively on the extent to which it
discloses information under IAS 18. For example, the National Multi Engineering Industries in the second market had the highest debt ratio in the sample (1.07) and just published one item (6.667%) included in the index. In terms of the literature review, the results for the leverage variable are consistent with the Australian findings of Palmer (2006) but inconsistent with some of the GCC results of Al-Shammari et al. (2008). The results of the current study for leverage are consistent with their findings for Saudi Arabia, Oman and Bahrain but different from the coefficients documented for Kuwait, Qatar and the UAE. Hypothesis 4 is accepted in the current paper.

6 Conclusions, recommendations and limitations

The focus of this study is to measure the extent of application of IAS 18 in Jordanian industrial companies. Specifically, the objectives of this study are

1. to investigate the extent of application of IAS 18 in selected Jordanian industrial companies listed on the ASE
2. to investigate the impact of some certain corporate characteristics such as company size, profitability, liquidity, leverage, listed conditions and domestic – foreign ownership of company on the extent of application of IAS 18 among Jordanian industrial companies.

To achieve the objectives mentioned above, an index comprising of 15 items were applied to 40 industrial companies listed on ASE. It was found that, on average, the companies applied approximately 56% of the items included in the index, with only 13 companies receiving high application scores. These results indicate that there is significant scope for additional application of IAS 18 in the Jordanian industrial companies listed on the ASE. The results of model (2) found that company size variable is statistically significant with a very low coefficient (0.000001) meaning that there is virtually no relationship to the application of IAS18. In other words company size variable had a small contribution level on the application of IAS18. On the other hand, the liquidity and leverage variables coefficient of (–3.728) and (–51.513) are both significant, respectively. The study hypotheses are tested using a regression analysis. The results of this analysis in model (2) identified company size to be significantly and positively associated with the application of IAS 18. The analysis also identified liquidity and the leverage to be significantly and negatively associated with the application of IAS 18, but identified that profitability is neither significant nor positively associated with the application of IAS 18. Finally, based on the results of model (2) the conclusions could be summarised:

1. an increase in company size may increase the level of application of IAS 18
2. profitability does not influence on the level of application of IAS 18.

Since the regression analysis exhibited no statistical relationship;

3. increases in liquidity may decrease the level of application of IAS 18
4. increases in leverage may decrease the level of application of IAS 18.
According to the findings and the conclusions, the following recommendations are suggested:

1. Use available cash rather than debts for the trading operations of the company (e.g., purchases and sales) in order to increase the level of application of IAS 18 among Jordanian industrial companies.

2. The company should consider lowering and balancing both their liquidity and leverage (debt) with a much higher coefficient in leverage than liquidity, that would appear to that utilising less debt may be more beneficial in order to increase the level of application of IAS 18.

A limitation of the current study is that the results could not be generalised among all the Jordanian listed companies; it is very specific to industrial companies. The researcher suggests that future researches focus on finding and testing variables that may be more relevant and specific to Jordan, and provide greater explanation to local companies’ adherence to IAS 18 (e.g., taxes, industry, audit and risk). It should be remembered that the study utilised a common internationally applied model that is not specifically tailored to finding explanatory variables in Jordan with regard to IAS 18.

References


Determinants of revenue recognition disclosures


Notes


2. This Law was updated in 2002; there were two major amendments for the Accountancy Profession under Law 2002. Under this legislation, JACPA became a self-funded and administratively independent organisation (Article 7). JACPA was also attached to the High Council of the Accounting Profession which gave it new powers such as responsibility to draft its regulations, disciplinary authority over its own members, and the right to inspect its members’ working papers (Abdullatif and Al-Khadash, 2010; Mardini et al., 2013).

3. According to the Companies Act 1989, the financial statements had to be prepared in accordance with GAAP; however, the Act did not mention which specific GAAP was to be followed.

4. Al-Akra et al. (2010b) found that foreign investments accompanying privatisation had a significant impact on the levels of accounting disclosure in Jordan. Specifically, they documented that the privatisation programme conducted by the government increased the level of voluntary disclosure by Jordanian listed companies.

5. This JCM contains three institutions, the Jordanian Securities Commission (JSC), the Amman stock exchange (ASE) and the Securities Depository Centre (SDC), in order to improve the investment climate within Jordan.

6. As a part of Securities Law No. 23 of 1997, the Amman financial market was merged with the ASE (Jordanian Securities Commission, 1997). The market is organised into a primary market and a secondary market for the trading of listed securities. The primary market involves companies seeking a listing for the first time. The secondary market involves trading in securities which are already issued.

7. In 2002, the Securities Law of 1997 was updated. Again, the new law required all entities to comply fully with IASs in the preparation of their annual reports and to submit an annual audited report to the JSC. The law stated that "the international accounting standards issued by the International Accounting Standards Board are hereby adopted whereby all the parties subject to the Commission’s monitoring shall prepare their financial statements consistently therewith" (Article 14).
Appendix

The index of IAS 18 items

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Subject/value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Sales of goods</strong></td>
<td></td>
</tr>
<tr>
<td>SOG1</td>
<td>The amount of revenue can be measured reliably.</td>
<td>Sales of goods</td>
</tr>
<tr>
<td>COGS</td>
<td>The costs incurred or to be incurred in respect of the transaction can be measured reliably.</td>
<td>Cost of goods sold</td>
</tr>
<tr>
<td>RE</td>
<td>Revenue and expenses that relate to the same transaction or other event are recognised simultaneously; this process is commonly referred to as the matching of revenues and expenses.</td>
<td>Matching revenue and expenses</td>
</tr>
<tr>
<td>SOG2</td>
<td>Goods include goods produced by the entity for the purpose of sale and goods purchased for resale, such as merchandise purchased by a retailer or land and other property held for resale.</td>
<td>Sales of goods</td>
</tr>
<tr>
<td>SOG3</td>
<td>Sale of goods is recognised only when it is probable that the economic benefits associated with the transaction will flow to the entity.</td>
<td>Sales of goods</td>
</tr>
<tr>
<td></td>
<td><strong>Rendering of services</strong></td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td>In Jordan the rendering services is not used by the Industrial Jordanian companies. So the items of this subtitle on the standard cannot be taken and ignored.</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td><strong>Interest, royalties and dividends</strong></td>
<td></td>
</tr>
<tr>
<td>INT</td>
<td>The amount of the revenue can be measured reliably.</td>
<td>Interest</td>
</tr>
<tr>
<td>DIV</td>
<td>Dividends shall be recognised when the shareholder’s right to receive payment is established.</td>
<td>Dividends</td>
</tr>
<tr>
<td></td>
<td><strong>Disclosure</strong></td>
<td></td>
</tr>
<tr>
<td>APRR</td>
<td>The accounting policies adopted for the recognition of revenue</td>
<td>Accounting policies</td>
</tr>
<tr>
<td>DIS1</td>
<td>• The sale of goods</td>
<td>Disclosure</td>
</tr>
<tr>
<td>DIS2</td>
<td>• Interest</td>
<td>Disclosure</td>
</tr>
<tr>
<td>DIS3</td>
<td>• Royalties</td>
<td>Disclosure</td>
</tr>
<tr>
<td>DIS4</td>
<td>• Dividends.</td>
<td>Disclosure</td>
</tr>
<tr>
<td>DIS5</td>
<td>An entity discloses any contingent liabilities and contingent assets in accordance with IAS 37 Provisions, Contingent Liabilities and Contingent Assets. Contingent liabilities and contingent assets may arise from items such as warranty costs, claims, penalties or possible losses.</td>
<td>Disclosure</td>
</tr>
<tr>
<td>DIS6</td>
<td>The amount of revenue arising from exchanges of goods or services included in each significant category of revenue.</td>
<td>Disclosure</td>
</tr>
</tbody>
</table>

Notes: SOG refers to sales of goods; COGS refers to cost of goods sold; RE refers to revenue and expenses; INT refers to interest; DIV refers to dividends; APRR refers to accounting policies adopted for the recognition of revenue; DIS refers to disclosure the amount of each significant category of revenue recognised; MRFV refers to measurement of revenue at the fair value; N/A refers to not available.
The index of IAS 18 items (continued)

<table>
<thead>
<tr>
<th>Code (SPSS)</th>
<th>Description</th>
<th>Subject/value (SPSS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRFV</td>
<td>Revenue shall be measured at the fair value of the consideration received or receivable.</td>
<td>Measurement of revenue</td>
</tr>
</tbody>
</table>

**Effective date**

This standard becomes operative for financial statements covering periods beginning on or after 1 January 1995.

Total of items: 15

Notes: SOG refers to sales of goods; COGS refers to cost of goods sold; RE refers to revenue and expenses; INT refers to interest; DIV refers to dividends; APPR refers to accounting policies adopted for the recognition of revenue; DIS refers to disclosure the amount of each significant category of revenue recognised; MRFV refers to measurement of revenue at the fair value; N/A refers to not available.