

# Earnings Quality Determinants of the Jordanian Manufacturing Listed Companies

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Received: February 12, 2015

Accepted: March 5, 2015

Online Published: April 25, 2015

doi:10.5539/ijef.v7n5p140

URL: <http://dx.doi.org/10.5539/ijef.v7n5p140>

## Abstract

The current study aimed to identify the factors that affect the earnings quality of Manufacturing Companies listed at Amman Stock Exchange (ASE). Accordingly, four variables were selected, namely: Financial leverage, Firms performance, investment decisions and accounting conservation, in presence of two control variables, namely: firms size and cash holding. Ordinary least square (OLS) cross sectional regression model was applied on a sample of (58) manufacturing companies listed at Amman Stock Exchange (ASE) during the period 2000-2013 resulting in 812 firm/year observation. The results of the analysis showed the existence of statistically significant direct impact for each of firm performance, financial leverage and accounting conservation on earnings quality. These results are consistent with the view that the greater the company's earnings are, it becomes the less likely to practice creative accounting or earnings management, what led to increased earnings quality. Also, these results are consistent with the point of view that external creditors are considered as external control tool over management's performance, what in turns, reduces the agency cost and reduces the likelihood of practicing creative accounting or earnings management, which will reflect positively on the quality of earnings. Finally, accounting conservation plays a role in the reduction of the practice of creative accounting or earnings management.

**Keywords:** earnings quality, Jordan

## 1. Introduction

Traditional methods-including financial ratios and disclosed income figures are no longer sufficient for companies' financial analysis; whereas financial ratios suffer several shortcomings aspects linked to the nature of the accounting data from which such financial ratios are derived. For example, data used by the financial ratios are only data that can be expressed in cash, and thus, financial ratios do not reflect accurately the reality of the case.

This has been confirmed from the results of the stalled and collapsed companies where accountants and financial analysts failed to predict such failure. The problem is that the financial statements prepared on the basis of accounting principles generally accepted and standards issued by professional bodies associated with the elements of those lists and financial ratios derived from them have a lot of estimates and judgments and allow departments to show misleading results.

Moreover, the multiplicity of methods of measuring economic events-expressed by these data-makes the comparison process as futile, in addition to allowing the use of multiple alternatives for accounting measurement, and then making a change in accounting policy provides opportunities for the management of the enterprise to take advantage of this feature in improving the status of the company's earnings and financial position through what is known as "Earning Management" which reduces the credibility of financial ratios derived from these data to assess the performance of companies.

The problem of the current study stems from the availability of several methods that could be used by the preparers of the financial statements to positively or negatively influence the income results, some of which include the use of personal judgments such as reserves and financial allocation ratios, the selection of accounting policy or the exploitation of flexibility in accounting standards such as the delay in revenues disclosure while accelerating expenses disclosure.

The problem lies in the unavailability of appropriate tools for the detection of the extent to which such procedures influence or distort the disclosed income to measure the level of quality of disclosed earnings, and therefore, the current study seeks to answer the following question: Do the earnings enclosed in financial statements issued by the Manufacturing Companies listed at Amman Stock Exchange (ASE) enjoy an acceptable level of quality? What are the factors that influence the quality of such earnings?

The importance of this study stems from that it sheds lights on the quality of earnings disclosed by the Manufacturing Companies listed at Amman Stock Exchange (ASE), what in turn, serves the parties that depend on such earnings to make different decisions. Also the importance of the current study stems from that it seeks to determine the factors affecting the quality of the earnings of the Jordanian manufacturing companies.

The study sample consisted of All Jordanian Manufacturing Companies listed at Amman Stock Exchange (ASE) for the period 2000-2013 which data are available on ASE official website. The number of companies within the study sample which meet such conditions was 58 companies.

In order to determine the factors that affect the earnings quality of Manufacturing Companies listed at Amman Stock Exchange (ASE), four factors were selected, namely: Financial leverage, Firms performance, investment decisions and accounting conservatism, in presence of two control variables, namely: firms size and cash holding.

## 2. Literature Review

Since there are different users of the information published on the company, there are different definitions for earnings quality consistent with the point of view of each group. In spite of these various definitions, but it is recognized that the more earnings approach to cash, the more quality they gain. Khajavi and Nazemi (2005) have stated that earnings quality is affected by earnings continuity, Continuity and the extent to which earnings reflect the results of economic transactions. Bodie et al. (2002) have defined earnings quality as “the continuation of the current level of earnings in the coming periods”. As for Williams (2005), he concluded that earning stability and earnings management are the most important determinants of earnings quality.

There are a set of factors which were examined and proved that they have an impact on earnings quality, namely:

Quality of accounting standards: as the stringent standards prevent the entity's management from exploiting loopholes found in the accounting principles for the purpose of managing earnings that would increase the earnings quality Ewert and Wagenhofer (2005).

Different accounting standards: as the different accounting standards used in the preparation of financial reports between local and international standards would represent an important factor that influences earnings quality, whereas Barth et al. (2008) argue that companies that apply the international accounting standards practices have less Earnings Smoothing practices.

Shareholder structure: Lee et al. (2007) found that earnings management practices decrease in companies that have a higher proportion of independent members of the Board of Directors. Velury and Jenkins (2006) have concluded that there was a statistically significant positive relationship between the percentage of shares owned by members of the Board of Directors and earnings quality. Lai and Tam (2007) have found a statistically significant positive relationship between the percentage of independent members of the Board of Directors and earnings quality, but Wang (2007) did not support this finding.

Ratio of capital concentration: Tang and Wang (2007) have concluded a statistically significant positive relationship between capital concentration and earnings quality, so that when the ratio of capital concentration decreases, the earnings quality also decreases.

Number of the board of directors: Beasley (1996) has concluded the presence of statistically significant direct relationship between the number of board members and Earnings management and therefore in terms of statistical inverse relationship between the number of board members and the quality of earnings.

Number of the Audit Committee meetings: Wild (1996), Vafeas (2005) and Zhai (2006) have concluded that the formation and the increase of the number of members of the Audit Committee, as well as the increase of the number of the number of the Audit Committee meetings have a positive impact on earnings quality.

Damori (2010) has addressed the relation between earnings quality, earning-smoothing and company value, and concluded that investors prefer high quality earning-smoothing companies. Khajavi and Nazemi (2005) have studied the impact of accruals on earnings quality but did not find a statistically significant impact of accruals on earnings quality for Tehran Stock Exchange Listed Companies. Haghighat and Homayoun (2004) has examined the relationship between accruals and earnings and concluded that there was a statistically significant positive

relationship between quality of accruals and each of: firms' size, earnings, cash flow from operating activities and sales. Francis et al. (2002) have studied the relationship between earnings quality and each of cost of debt and cost of equity. They found an inverse relationship between earnings quality and costs, where companies of low earnings quality have high debt and common stock costs.

### 3. Methodology

#### 3.1 Variables of the Study

##### 3.1.1 Dependent Variable

Earnings quality is the dependent variable of the current study and which is expressed in this study as the ratio of the cash flow from operating activities to EBIT, as follows:

$$E\_Q = \frac{CFO}{EBIT} \quad (1)$$

Where  $E\_Q$  is the proxy of the Earnings quality,  $CFO$  cash flow from operating activities,  $EBIT$  is the earnings before interest and tax.

##### 3.1.2 Independent Variables

Investment Decision: Investment decision is one of the dependent variables in this study which is defined as the ratio of the total investments to total fixed assets as follows:

$$I\_D = \frac{TOINV}{TOFAS} \quad (2)$$

Where  $I\_Q$  is the proxy of the Investment decision.  $TOINV$  is the total investments.  $TOFAS$  is the total fixed assets.

Financial Leverage: Financial leverage is expressed as Total Debt to total liabilities, and which aims to measure the impact of external control resulting from debt on earnings quality improvement, as many studies have concluded that there is an inverse relationship between the practice of creative accounting and the volume of the external debt. Financial leverage can be defined as follows:

$$LEV = \frac{\text{Total debt}}{\text{Total liabilities}} \quad (3)$$

Where:  $LEV$  is the proxy of the Financial Leverage.

Firm performance: Firm performance is defined as the ratio of the EBT to total asset where EBT is the return before tax as follows:

$$F\_P = \frac{EBT}{\text{Total assets}} \quad (4)$$

Where  $F\_P$  is the proxy of the firm performance.  $EBT$  is the earnings before tax.

Accounting Conservation: Accounting conservation is expressed as the ratio of the Book value to Market Value, where book value equals total equity minus preferred shares divided by weighted average of the number of ordinary shares subscribed. Market value equals closing price at the end of the fiscal year multiplied by weighted average of the number of ordinary shares subscribed. Jain and Rezaee (2004) have concluded that the reduction of book value to market value to less than one refers the existence of an acceptable level of Accounting Conservation in the published financial statements. Accounting conservation is defined as follows:

$$A\_C = \frac{BV}{MV} \quad (5)$$

Where:  $A\_C$  is the proxy of the Accounting conservation.  $BV$  is the book value of the firm.  $MV$  is the market value of the firm.

##### 3.1.3 Control Variables

There are some variables that have been examined in previous studies, where results showed that they have an impact on earnings quality, and the non-inclusion of such variables in the standard model of the study could lead to inaccurate results. These variables are:

Firm's size: Firm's size is expressed as the natural logarithm of the total assets. This variable aims at examining whether earnings quality is affected by the firm's size.

Cash Holding: Cash holding is defined as the ratio of the current assets to Total assets. This variable aims at examining the impact of cash holding on earnings quality. Cash holding defined as follows:

$$C\_H = \frac{\text{Current assets}}{\text{Total assets}} \quad (6)$$

Where:  $C\_H$  is the proxy of the cash holding.

### 3.2 Estimation Regression Model

Earning quality can be considered as a function in investment decision, Financial Leverage, firm performance and accounting conservation in presence of Control variables which are firm's size and Cash holding. This means:

$$\text{Earnings quality} = f(I\_D, F\_P, LEV \text{ and } A\_C)$$

Estimation regression model that will be used in order to realize the objectives of the current study and test its hypotheses in presence of the control variables can be re-formulated mathematically as follows:

$$E\_Q_{it} = \alpha + \beta_1 I\_D_{it} + \beta_2 F\_P_{it} + \beta_3 LEV_{it} + \beta_4 A\_C_{it} + \beta_5 SIZ_{it} + \beta_6 C\_H_{it} + \varepsilon \quad (7)$$

Where:  $E\_Q_{it}$  is the earnings quality defined as the ratio of the cash flow from operating activities to EBIT, for the  $i^{th}$  cross sectional during the  $t^{th}$  period as  $i = 1, 2, 3, \dots, 58$  and  $t = 1, 2, 3, \dots, 14$ .  $\alpha$  is intercept.  $\beta^{ts}$  are unknown coefficient to be estimated.  $I\_D$  is the investment decision defined as the ratio of the total investment to total fixed assets.  $F\_P$  is the firm's performance defined as the ratio of the EBT to total assets.  $LEV$  is the financial leverage defined as the total debt to total liabilities.  $A\_C$  is the: Accounting conservation defined as the ratio of the book value to market value.  $SIZ$  is the firm's size defined as the natural logarithm of the total assets.  $C\_H$  is the cash holding of the firm defined as the ratio of the current assets to total assets.

### 3.3 Hypotheses

In order to achieve the objectives of the current study and to test its hypotheses, the current study aims to test the following null hypotheses:

$H_{01}$ : There is no significant impact of the investment decision on the earnings quality.

$H_{02}$ : There is no significant impact of the firm's performance on the earnings quality.

$H_{03}$ : There is no significant impact of the financial leverage on the earnings quality.

$H_{04}$ : There is no significant impact of the Accounting conservation on the earnings quality.

Thus,

$$\beta_1 = \beta_2 = \beta_3 = \beta_4 = 0 \quad |sig. \leq 0.05$$

Where:  $\beta_1, \beta_2, \beta_3$  and  $\beta_4$  are the regression coefficients of the investment decision, firm's performance, financial leverage and Accounting conservation respectively from equation (7).

## 4. Data Analysis

### 4.1 Descriptive Analysis

Table (1) shows descriptive analysis of study variables of the Jordanian Manufacturing Companies within the study sample. These variables include: Dependent variable ( $E\_Q$ ), independent variables ( $I\_D, F\_P, LEV, A\_C$ ), and control variables ( $SIZ, C\_H$ ). Table 1 shows that proxy of the earnings quality was (1.023) in average, which means that the disclosed earnings of the Manufacturing Companies listed at Amman Stock Exchange (ASE) were of high quality, and this results contradicts the study carried out by Qraqish (2009) which concluded that the earnings of the Jordanian Manufacturing Companies suffers low level quality.

The same table shows that proxy for the firm's performance was 0.2119 in average and a standard deviation of 9.408. As for proxy for the financial leverage of the firm it was 0.4216 in average, what means that the Jordanian Manufacturing Companies highly depend on Equity to finance its needs. As for accounting conservation, the results showed that there was an accounting conservation in the Jordanian Manufacturing Companies, where the index of accounting conservation index was 0.3174, and this result is consistent with the results of a study carried out by Hamdan (2011) which concluded that the published financial reports of the Jordanian Manufacturing Companies have a acceptable level of accounting conservation.

Table 1. Descriptive analysis

variable	N	Mean	Median	Std. Dev.	Min	Max
E_Q	812	1.023	1.004	.3094	.56	1.73
I_D	812	.0868	.0855	.0197	.05	.13
F_P	812	.2119	.1871	.9408	-.1002	.44.91
LEV	812	.4216	.4111	.1107	.23	.65
A_C	812	.3174	.311	.07813	.15	.49
SIZ	812	24.845	24.20	4.594	17.51	35.59
C_H	812	.6133	.59	.12438	.40	.90

Note. E\_Q<sub>it</sub> is the earnings quality I\_D is the investment decision. F\_P is the firm's performance. LEV is the financial leverage. A\_C is the Accounting conservation. SIZ is the firm's size. C\_H is the cash holding of the firm.

#### 4.2 Regression Analysis

Table 2 shows the results of regression analysis. The table shows the existence of direct impact of investment decision (I\_D) on earnings quality, but this impact was insignificant at confidence level of 95%, where regression coefficient and t-value of investment decision were (0.367, 0.218) respectively. Accordingly, we Fail to reject the  $H_{01}$  which states that: *There is no significant impact of the investment decision on the earnings quality.*

As for Firm's performance (F\_P), the results showed the existence of statistically significant direct impact of Firm's performance (F\_P) on earnings quality at confidence level of 99%, where regression coefficient and t-value of the F\_P variable were (0.23, 5.579) respectively. Accordingly, we reject the  $H_{02}$  which states that: *There is no significant impact of the firm's performance on the earnings quality.* This result suggests that whenever the company performance improves and its earnings increase, the company's earnings approach cash and it becomes of highest-quality earnings.

Table 2. Regression analysis

Variable	coefficient,
I_D	0.367
	0.218
F_P	0.23**
	5.579
LEV	0.051*
	2.01
A_C	0.896**
	6.07
SIZ	0.013
	1.702
C_H	0.169
	0.619
df	
Regression	6
Residual	805
Total	811
F-statistic	5.828
p-value	0.000
R-square	0.364
Adj. R-Square	0.302

Note. First line regression coefficient, second line t-value, \*\*, \* 1% and 5% significance level respectively. The critical t-value at 1%, 5% = 2.579 and 1.96 respectively. E\_Q<sub>it</sub> is the earnings quality I\_D is the investment decision. F\_P is the firm's performance. LEV is the financial leverage. A\_C is the Accounting conservation. SIZ is the firm's size. C\_H is the cash holding of the firm.

As for Financial Leverage (LEV) expressed as Debt Ratio, the results contained in Table 2 showed that earnings quality are affected significantly with the Financial leverage at confidence level of 95%, where regression

coefficient and t-value of LEV were (0.051, 2.01) respectively. Accordingly, we reject the  $H_{03}$  which states that: *There is no significant impact of the financial leverage on the earnings quality.*

Another result is shown in Table 2 which is that there is a statistically significant direct impact of accounting conservation on earnings quality at confidence level of 99%, where the regression coefficient and t-value were (0.896, 6.07) respectively. Thus we reject the  $H_{04}$  which states that *There is no significant impact of the Accounting conservation on the earnings quality.*

In addition, the results contained in the table show that there is a direct impact for the control variables on the earnings quality for the Jordanian manufacturing listed companies. But the impact was insignificant.

## 5. Conclusion

The current study aimed at identifying the factors that affect the earnings quality of Manufacturing Companies listed at Amman Stock Exchange (ASE). Accordingly, four variables were selected, namely: Financial leverage, Firms performance, investment decisions and accounting conservation, in presence of two control Variables, namely: firms size and cash holding. Ordinary least square (OLS) cross sectional regression model was applied on a sample of (58) Manufacturing Companies listed at Amman Stock Exchange (ASE) during the period 2000-2013 resulting in 812 firm/year observation. The results of the analysis showed the existence of statistically significant direct impact for each of firm performance, financial leverage and accounting conservation on earnings quality. These results are consistent with the view that the greater the company's earnings are, it becomes the less likely to practice creative accounting or earnings management, what led to increased earnings quality. Also, these results are consistent with the point of view that external creditors are considered as external control tool over management's performance, what in turns, reduces the Agency cost and reduces the likelihood of practicing creative accounting or earnings management, which will reflect positively on the quality of earnings. Finally, accounting conservation plays a role in the reduction of the practice of creative accounting or earnings management.

## Acknowledgements

The author is grateful to the Applied Science Private University, Amman, Jordan, for the financial support granted to this research project (Grant No. DRGS-2014-2015-146).

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