

An Empirical Analysis of the Relationship between Institutional Investors and Earning Management

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Abstract

The study spotlight and investigate the relationship between institutional investors and earning management. We use institutional investor's shareholding as independent variable, firm size and leverage as control variables and earning management as dependent variable. We collected data of 100 manufacturing firms listed on Pakistan stock exchange, through random sampling techniques for the period 2010-2016. We predicted final results on the bases of Correlation and random effect model. The results demonstrate that institutional investors and firm size have positive significant effect on earning management of manufacturing sector firms in Pakistan. However leverage showing significant negative relationship with the earning management in these firms. This study will help the decision makers and top management of the manufacturing sector firms.

Keywords: Institutional investors, Earning management and random effect

Introduction

The global competitive world in this modern era has some challenges for the businesses to actively present in the capital market with somehow distinction. Owners of the firm want desirable control and transparent management and at the same time these firm want separation of owners and management and want very good co-ordination between them (ullah and Rehman, 2016). When there is a separation between management and shareholders, management as the representative of owners and shareholders are responsible for management of the firm. But due to personal interest agency problem arises from the contradicting interest of owners and management, violating the rights of each other, hence there is a conflict of interest between these two groups, where agency cost is created by the presence of such conflict of interest (Jensen & Meckling, 1976). Agency costs adversely affect the firm value and reputation.

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Shareholders want to maximize their wealth and to reduce the agency cost. To better deal with such conflicts firms promulgate efficient corporate governance mechanisms in this regard.

Corporate governance plays a vital role to improve the company's performance. Some of the most important mechanisms which help improving the firm value are, the managerial ownership, institutional ownership, CEO duality, corporate accountability, transparency, non-executive director, executive directors, audit committee, board independence, internal control and many others (Vakilifard & Bavandpour, 2010). Among all of these, the role of institutional investors getting more important. According to Bushee (1998), institutional investors comprised of huge group of investors like banks, insurance and investment firms specialist in investing in other firms. The institutional investors' presences help to change the business unit behavior (Velury & Jenkins, 2006).

Institutional investors play variety of roles and functions in forming the corporate governance structure and mechanism. This group of shareholders has a key impact to influence the firm's accounting and reporting pattern and procedures (Gillan & Astarcks, 2003).

Net income can be predicted vital element of the financial statement, which has a uniform and considerable effect on the investment decisions. However, there is traditional assumption of rational behavior, which states that all type of investors prefers their interests and maximizes their wealth. In this connection managers also maximize their own interests and wealth. However, in some cases, an increase of shareholder's wealth does not necessarily mean an increase wealth of other groups including retail shareholders. This fact predicts a missing link about alignment between the interest of managers and other shareholders of the firm. However this alignment is vital to maximize the firm's wealth and market share (Mehrani & Bagheri, 2009). Therefore, managers need to manage the key item of financial statement i.e. net income for the best interest of the firm.

Since institutional investors are considered the largest group representing shareholders. This shareholders group role in monitoring the managers, performance is vital and it is strongly documented that the existence of this group in the composition of ownership structure significantly influences the corporate earnings management. In similar background, Mehrani and Bagheri (2009) asserted that institutional investors invest their resources for the motivation to control the behavior of the managers for their own interests.

Keeping in view, the justification of this study, the gap exists in the context of Pakistan to explore the relationship between institutional

investors and earning management, specifically using the data of manufacturing firms. Moreover, none of the study tested these variables for an appropriate model. This paper tested the data for an appropriate model, and then applied an appropriate model i.e random effect which correctly supports the nature of the data of this study.

Objectives of the Study

This research is based on following objectives.

- a) To investigate the impact of firms institutional shareholding on the earning management of manufacturing sector firms in Pakistan.
- b) To find out the role and effect of firm leverage and firm size on the earning management of these firms.

Literature Review

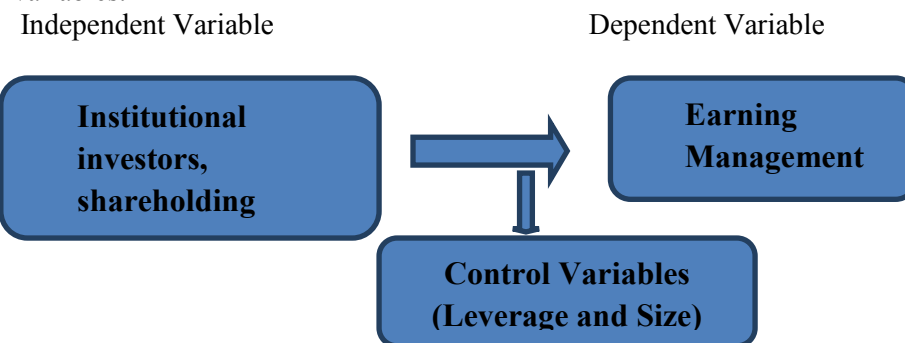
Cheng and Reitenga (2009) analyzed the relationship between institutional investors and earning management using modified Jones model for discretionary accruals and confirmed a significant and positive relationship between these two variables for the US firms. A similar study was conducted in Malaysian context and the results evidenced insignificant relationship between institutional investors and earning management (Jalil and Rahman, 2010). However a similar study in the same country predicted a significant positive results for the relationship between institutional investors shareholding and the earning management quality (Hashim and Devi, 2008). Alves (2011) investigated the impact of board structure on earnings management of Portuguese firms. In this study, a sample of 303 firm –years over the period 2002-2007 was selected and the study defined two percentages of people or organizations that have company's common stock as ownership percentage of institutional shareholders. The results showed that there was a significant and negative relationship between ownership percentage of institutional shareholders and earnings management. Rouhi and sultani (2012) conducted another investigation on 123 listed companies in Tehran Stock Exchange over the period 2005-2010 and reported that there was a positive and significant relationship between corporate governance and quality of earnings prediction. However, a significant relationship between control variable of financial leverage and quality of earnings prediction was not observed.

Yang et al (2009), in their study, examined the impact of board structure and institutional ownership structure on earnings management on the 613 listed companies in the Malaysian stock market over the period 2001-2003. The results indicated that there was no significant relationship between institutional ownership and earnings management. In another study, Moradi and Namazi (2011) investigated some Iranian

companies and reported that there was a positive and significant relationship between institutional ownership and earnings quality. Salajegheetal.(2012) investigated the impact of ownership structure on earnings management in the context of Iran and found significant relationship between institutional shareholding and earning management. They argued that institutional investment encourages the firm earning management and financial performance to some extent. In another study in the same country Iran, Valahzaghard, Shabanian and Chaleshtori (2013) confirmed insignificant relationship between the institutional shareholding and earning management in banks. However they reported a negative significant relationship between leverage and firm discretionary accruals. Fayoumi et al. (2010) tested the relationship between ownership structure and earning management analyzing the firms listed on Jordan stock exchange and found that institutional shareholding is significantly correlated with the discretionary accrual of Jordanian firms. But the study reported insignificant results for the control variables i.e. leverage and firm size with the firm discretionary accruals. While in contrast to the above researcher, Ramadan (2012) also investigated the relationship between institutional investors and accounting flexibility. The results evidenced significant negative relationship between accounting flexibility and institutional ownership. He also reported that firm leverage and size has negative insignificant relationship with firm earning management.

Theoretical Framework

After reviewing of the relevant literature, the below theoretical framework has been developed to establish the relationship between variables.



Research Hypothesis

HO: There is insignificant relationship between ownership percentage of institutional investors and earnings management of companies.

H1: There is a significant relationship between ownership percentage of institutional investors and earnings management of manufacturing sector firms.

HO: There is insignificant relationship between leverage and earnings management of firms.

H2: There is significant relationship between leverage and earnings management of manufacturing sector firms.

HO: There is insignificant relationship between firm size and earnings management of firms.

H2: There is significant relationship between size and earnings management of manufacturing sector firms.

Research Model

The following research model has been developed for the analysis of the study.

$$\text{DACC} = \beta_0 + \beta_1 \text{Institutional investor} + \beta_2 \text{Leverage} + \beta_3 \text{size} + e$$

Where, DACC is the discretionary accruals, representing the earning management of the firm, institutional investors represent the shareholding by the institutional investors, leverage means the debt to equity ratio of the firm and size represent the log of sale.

Research Methodology

Population and Sampling procedures

The population of the study represents all firms listed on Pakistan stock exchange in the manufacturing sector of Pakistan. The study randomly selected 100 manufacturing firms having their existence before 2010 and has continuous data for each variable for each period there onward till 2016. All those firms have been included in the data analysis which have homogeneity in information's and follow strictly the codes of corporate governance promulgated by the government of Pakistan.

Data collection Techniques

The data of the study has been collected using secondary. The data have been collected from Repository of Pakistan stock exchange and the annual reports of the selected firms.

Measurement and operational definitions

All the variables of this study have been taken from previous studies which stand valid to validate the same variables for this study in the context of Pakistan. We use discretionary accruals for measuring the earning management which is the dependent variable of the study. We use modified Jones model for the calculation of earning management. The same model has been used by previous researchers in their studies

(Dechow et al, 1995; Yang et al, 2009; Ramadan, 2012). The study uses institutional investors as the independent variable, which is measured as the percentage of shares hold by the institutions and companies in the share holdings of the firm. The study uses leverage and firm size as control variables. The same control variables have been used by many previous researchers (MehraniandBagheri,2009).

Data Analysis

The present study is based on variety of statistical tools i.e descriptive statistic, Diagnostic statistics, and correlation and regression analysis.

Data Analysis and Empirical Results

The following statically tests are performed in this paper.

Diagnostic Tests

Heteroscedasticity Test

Cook-Weisberg has been performed to predict and investigate the heteroscedasticity in data. The obtained results in this paper for this paper are 0.234 which is insignificant at 5% probability level, which means no heteroskedasticity in the data.

Wooldrige Test for Serial Correlation (Autocorrelation)

To test the serial correlation in independent variable this test has been used, which predicted that there is no serial correlation in the independent variables of this study, as the tabulated value is insignificant at 5% probability level i.e 0.345 which signifies that independent variables are not serially correlated.

Model Specification Test

Langrange Multiplier test has been conducted to predict an appropriate model for the analysis of the data. The results obtained are significant at 5% prob level predicting value of 0.045, which signifies that fixed effect random effect model is an appropriate model for the analysis.

Descriptive Statistics

Descriptive statistics results are predicted in table-2 which shows that the average value of discretionary accruals (DACC)is 0.0032equal, which demonstrates that these firms have 0.32% accrual with in the ranges of - 0.4326to 0.6755.Average of the institutionalinvestorsisequalto0.4335, whichmeans43.35% are the average institutional shareholding in these manufacturing sector firms lies between 0.0324 to 0.5673.Average offinancial leverage(LEV)is 0.5443 which means that these firms leverage out 54% resources, lies between 0.0655 to 2.5641. Similarly size show average of 13.03 with in 9.1234 and 18.34.

Table1. Descriptive statistics

Variables	Mean	Median	Max	Min	Std.Dev
DACC	0.0032	-0.0047	0.6755	-0.4326	0.1319
INOWN	0.4335	0.3423	0.5673	0.0324	0.1988
SIZE	13.0374	12.8178	18.3454	9.1234	1.4098
LEV	0.5443	0.6448	2.5641	0.0655	0.2123

Correlation Analysis

Table3 predicts the correlation analysis of the study. The results show that there is positive significant correlation between DACC and institutional investors ownership ($r = 0.345$), this shows there is moderate strong correlation between earning management and institutional investors, shareholding. This determines the as the level of institutional investors increases than the earning management of these firms also tend to increase. The results also predict positive significant correlation between firm size and the discretionary accruals, as the co-efficient of determination value ($r = 0.210$) lies in the moderate level of correlation. However leverage indicates negative significant correlation with the firm earning management proxy (DACC).

Table2. Pearson correlation Analysis

Variables	DACC	INOWN	SIZE	LEV
DACC	1.000			
INOWN	0.345**	1.000		
SIZE	0.210**	0.034	1.000	
LEV	-0.221**	-0.087	-0.101*	1.000

Regression Analysis

Hausman test and random effect model has been used to analyze the results.

Hausman Test

Hausman test has been used to predict whether fixed effect model or random affect model support the data. The reported probability value is insignificant at 5% probability level, which determines that random effect model is an appropriate model for the analysis of this study.

Random Effect Model

The table 3 predicts the results of random effect model. The results indicate that institutional investors in firm shareholding has positive significant effect on the earning management, as the t-value is above the thresh hold value i.e $t = 2$ and is p-value is significant at 5% probability level. This signifies that institutional investor's shareholding in firm positively significantly affect the earning management of the firm. Similarly firm size also demonstrate positive significant effect on the earning management of these firms, as the t-value is significant at 5%

probability level, predicting positive significant impact on the DACC of these manufacturing firms. However leverage shows negative significant impact on the earning management of firm. The R-square value is 0.56 which predicts that 56% changes are been caused by the set of independent and control variables in the model. The Wald chi is 54.78 suggesting that the overall model is significant. Hair et al (2006) argued that if the F-statistic is significant at 5% probability level, it signifies the overall significance of the model.

Table 3: Random effect model using stock beta as dependent Variable

Variables	Coefficient	Standard error	t-stat	P-value
INST INVESTOR	0.2341	0.065	3.59	0.001
FIRM SIZE	0.1345	0.046	2.89	0.041
LEVERAGE	-0.3320	0.131	-2.52	0.043
R-Square	0.56			
Wald Chi	54.78			

Dependent Variable: DACC

Conclusion

This study was aimed to understand the relationship between institutional investors and earning management in the context of Pakistan, using financial data of 100 manufacturing firms. Corporate govern is vital for improving the financial performance of any firm. There are various elements of corporate governance important for the smooth functioning and uplifting of firm financial performance. Among them, the role of institutional investors is getting more important. Institutional investors are the kind of institutions specialist in managing shares and specialist in finding profitable avenues for investment purposes. These investors are thought to be valuable in changing the pattern and behavior change of business units(Velury&Jenkins,2006).

We use institutional investor's shareholding as independent variable, firm size and leverage as control variables and earning management as dependent variable. We collected data of 100 manufacturing firms listed on Pakistan stock exchange, through random sampling techniques for the period 2010-2016. We predicted final results on the bases of Correlation and random effect model. The results demonstrate that institutional investors have positive significant impact on the earning management. These findings are in line with the findings of previous researchers who documented the positive impact of institutional investors on the earning management (Yang et al, 2009; Ramadan, 2012). The results also predicted positive affect of firm size on the discretionary accruals for the manufacturing sector of Pakistan. These results are consistent with the findings of many previous researchers who

found similar positive relationship (HashimandDevi, 2008;Salajegheetal.,2012). However leverage showing significant negative relationship with the earning management in these firms. The same variable was found affecting earning management negatively by previous researchers (Fayoumi et al.,2010 ; Ramadan, 2012).

This study will help the decision makers and top management of the manufacturing sector firms. Moreover, this study can be conducted for comparing manufacturing sector firms and financial sector firms. Similar studies can also use moderator and mediator like information disclosure and the effect and the effect of GDP in future studies to make farther extensive researches in this particular area.

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