Earnings Quality of Private Equity-Backed and Non-Private Equity-Backed Firms in India

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Earnings quality signifies how accurately and correctly earnings are reported in a firm. High earnings in a firm can be attributed to conservative accounting policies or strong cash flows. In a publicly traded company, a manager might report higher earnings because doing so would lead to a good showing of the company and, in turn, overvaluation of the stock. The quality of earnings reported by a firm depends on the structure of the firm's ownership. Private equity investors add value to a company by providing financing as well as inputs to improve cash flows and increase earnings. A part of the earnings that are made by the private equity–backed firms is returned to the private equity investors; therefore, they will try to add quality (correct reporting of earnings and minimizing variation in the actual and reported earnings) and increase the earnings of the firm. There is another aspect to this thinking: If companies are not going for private equity investment, they will consider public equity as an alternate financing route. Companies going for public equity ownership will also report higher earnings because doing so will lead to better price-to-earnings ratios and, in turn, market capitalization for the firm.

Private equity companies invest in both listed and unlisted firms. This study examines the impact of private equity investment on the earnings quality of firms. The study has taken a dummy for private equity, which is equal to one for companies backed by private equity investment and zero for companies without private equity investment. The study measures the effect of private equity finance on the earnings of the firms.

THEORETICAL FRAMEWORK

Earnings quality is an important factor in the financial reporting system. Penman and Zhang [2002], realizing that there is no appropriate definition of earnings quality, indicated that earnings quality means that the reported earnings provide a good forecast of future cash flows and are stable and persistent over a period of time. Managers manipulate earnings to make money, but good earnings quality exists when there is minimum deviation between the actual and the reported earnings in a firm. For some firms, quantity of earnings may be important; for others, earnings quality might be important.

Earnings quality would mean different things to different users of financial statements. For regulators, high earnings quality is said to exist if the earnings are in line with generally accepted accounting principles (GAAP). For managers of a firm, high earnings signify the current operating income and their ability to forecast future operating income. High earnings quality exists when the earnings represent the underlying

economies of the business and are stable over a period of time. When these points are considered, the reported earnings are considered to be of high quality and provide a correct basis for valuing a company.

There are two ways to measure earnings quality in accordance with GAAP principles:

- Reliability
- Relevance

There are two main ways to measure the earnings of a firm: *cash accounting* and *accrual accounting.* Cash accounting records transactions that enter or leave the firm and therefore is more reliable because proper records are maintained. The downside of cash accounting is that it is not as relevant compared to the accrual system of accounting because, for example, if the company has made a big investment in a project, the returns or the inflows will not occur immediately but instead over a period of time. This would reduce earnings immediately, but it does not promise stable earnings over the future period of time.

Accrual systems of accounting are more relevant compared to the cash system, although they are less reliable in nature. The accrual system introduces the idea of periodicity and splits the transaction into different periods. This is done so that revenues earned in a single period can be recorded in the same period and can be matched with the expenses in that period in order to provide a clear picture of the earnings of a firm.

To measure the persistence effect, we give more importance to the accrual component of earnings. Low earnings quality means low stability of earnings and a high likelihood of overstatement of earnings, which might lead to lower earnings in the future.

REVIEW OF LITERATURE

High earnings management provides a better forecast of earnings for future years. Katz [2009] discussed ownership structure affecting the earnings and long-term performance of the firm. Katz took financial data for firms with and without private equity before and after issuing an initial public offering (IPO) to examine firm performance and concluded that private equity–backed firms have better earnings management and manage their earnings conservatively. Post-IPO, they exhibit better long-term stock performance compared to non-private

equity–backed firms. The reason could be better management and reputational considerations for the same.

The persistence of earnings signifies the stability of the firm's earnings and gives an unbiased view of the working of the firm. Fairfield [2006] discussed the role of accruals in a firm. High accruals in a firm are a result of judgement from the income statement perspective, and low accruals occur because firms are judged from the balance sheet perspective. The magnitude and sign of accruals signify the persistence of earnings. For a firm with high accruals, more accruals improve the persistence of earnings relative to cash flow, whereas for a low-accrual firm, more accruals reduce earnings persistence. It is said that low-accrual firms are driven by special items, which led to bad performance in the past and poor investor relations.

Earnings quality is said to exist if earning in sync with GAAP. Nikbakht and Aflatooni [2010] compared earnings components based on U.S. GAAP and Iranian GAAP. Stock returns of listed Iranian firms were regressed on operating cash flows and accruals, which also were adjusted and regressed on U.S.–listed firms' stock returns. The results indicate no significant differences between earnings components of U.S. GAAP and Iranian GAAP in explaining the stock returns. The study has an important influence on the accounting standards of Iranian firms and how cash flow statement classifications affect the firms' value relevance.

Beuselinck, Joos, and Van der Meulen [2007] compared accounting earnings for 14 European countries during 1990–2005. This study covers a gap in past studies in which the fundamentals driving the difference in earnings in different countries have been considered. Accrual measurement is affected by the business cycle and incentives offered by firms. Incentives in turn depend on the institutional framework of the country, stock market development, importance of bank financing, and relations with labor union members. Results suggest that the mandatory introduction of International Financial Reporting Standards (IFRS) in 2005 did not bring much improvement in earnings for European countries.

Hribar and Collins [2002] studied the impact of measuring accruals as changes in balance sheet items compared to measuring accruals from cash flow statements. They concluded that measuring earnings using the balance sheet approach leads to measurement errors and biases. Errors in accrual estimations can lead to

return regressions in which discretionary and nondiscretionary components of accruals act as the independent variables. The authors concluded that the cash flow system of accounting is a better measure for estimating accruals compared to the balance sheet approach.

The earnings of a firm should be unbiased in nature. That is, they should not be manipulated or influenced or reflect an incorrect image of the accounting policies and workings of the firm. Ewert and Wagenhofer [2010] discussed various earnings metrics. Biases in earnings occur as a result of a manager who has the market price, incentives, and knowledge of the earnings of the firm. Earnings quality is a reduction in the market uncertainty about the firm's value due to the reported earnings by the firm. Earnings quality is compared with value relevance, persistence, predictability, smoothness, and quality of accruals. The authors found that value relevance and persistence are closely related to the earnings quality measure. The study provided guidelines for using different earnings metrics as the measure of earnings.

Dechow, Kothari, and Watts [1998] developed a simple model of earnings, cash flows, and accruals using random walk sales, variable costs, accounts payable and receivable, and various accounting procedures. The model used in their paper implies that earnings predict future operating cash flows. They concluded that if all expenses are variable and sales follow a random walk, then the earnings also follow a random walk.

Badertscher, Katz, and Rego [2011] discussed how private equity ownership affects corporate tax avoidance. Firms change their tax patterns when they are going public or private and try to avoid taxes. Private equity–backed firms have lower marginal tax rates. Four proxies for tax avoidance were used: the firm's book tax differences, cash effective tax rate, before-financing marginal tax rate, and total of book tax differences. The Heckman [1979] correction procedure was used to control the endogenous nature of private equity financing. The authors found that private equity–backed firms have better tax management policies because they have better management.

Givoly, Hayn, and Katz [2010] compared accounting quality for two types of firms: one with publicly traded equity and other with privately held equity. Two hypotheses were made: the *demand hypothesis* and the *opportunistic behavior hypothesis*, and the results were interpreted on the basis of these hypotheses. Earnings were measured in four ways: accrual persistence, finding the estimation error in the accrual process, the extent of reporting conservatism, and considering the effect of an absence of proper earnings management on the firm. According to the demand hypotheses, publicly traded firms manage earnings better than privately held firms, but the opportunistic behavior hypothesis says that in public equity firms, managers want to have more earnings and so report less earnings. The results are in line with the opportunistic behavior hypothesis that private equity–backed firms have better accrual management and earnings management compared to public equity–backed firms.

Discretionary accrual is that expense that is recorded in the account books but has yet to be realized. It is left to the discretion of the company to consider it as an accrual and not as a liability in the financial statements.

Dechow, Richardson, and Tuna [2003] found a kink in the earnings reported by a firm: Some companies report very high losses, whereas some report very high profits. The authors tried to discover if the discretionary accruals are the reason behind this kink, but the analysis could not provide a justification for this hypothesis. When distribution of earnings for negative discretionary accrual firms is examined, the kink increases. The authors suggested that the actions of the auditors and not earnings management would explain the kink.

Dechow and Dichev [2002] discussed a new aspect of earnings quality and accruals. Accruals reduce timing and mismatch of cash flows but are done on the assumption of future cash flows, which in turn means there are estimation errors in the accrual measurement. As the magnitude of estimation errors increases, the quality of earnings and accruals decreases. The authors found that there is a relation between accrual quality and economic fundamentals and that accruals are negatively related to the standard deviation of sales, cash flows, earnings, and operating cycle length and are positively related to firm size. A strong and positive relationship between accruals and earnings persistence is proven.

Beatty, Ke, and Petroni [2002] compared publicly and privately held bank holding companies in their reporting of earnings. It is expected that public shareholders will report better earnings compared to privately held banks for steady performance. Compared to privately held banks, publicly held banks report less decline in earnings and use loan loss provisions to eliminate the decrease in earnings. An asymmetric pattern of increase in small earnings is attributed to better earnings management. The authors clearly explained the role of accounting in privately held firms.

Ball and Shivakumar [2006] addressed conventional nonlinear accrual models and showed three times the variation found in linear accrual models. Because linear accrual models do not consider the role of accruals in asymmetric timely loss recognition, they provide poor results for accrual estimation processes. Considering a linear relationship between earnings and cash flows and ignoring the concept of timely loss recognition, the predictability of future cash flows is questioned.

Guo and Jiang [2013] examined the contribution of venture capital to entrepreneurial firms in China. Using a panel dataset of Chinese manufacturing firms and dividing them into venture capital (VC)–backed and non-VC–backed firms, the authors determined the effect of VC on performance and research and development (R&D) activities. The authors found differences in productivity and profit after VC investment. Higher return on sales, increased labor productivity, and greater return on equity are achieved post-VC investment, but no difference in sales growth and R&D activities is found. Comparing foreign VC and domestic VC, the authors concluded that foreign VC adds more value to firms compared to domestic VC.

Burgstahler and Dichev [1997] discussed two components of earnings: One is the operating cash flow component, and the other is change in working capital, which can lead to an increase in the earnings of the firm. Two theories to avoid earnings decline were considered in the study: stakeholder use of information-based heuristics and prospect theory, which discuss the motivation to decrease earnings declines and losses. In the first theory, the managers avoid reporting earnings losses because such reporting could lead to a decrease in the costs imposed by the firm in transactions conducted by stakeholders. The second theory discusses aversion to losses and declines.

Earnings management, when compared between public and private firms, has always shown that public firms report less loss compared to less profit and report earnings decline less compared to earnings increase. The reason is to give a good image of the company, and the private firms have less information asymmetry compared to public equity–backed firms. Beatty, Ke, and Petroni [1999] validated this notion by comparing public and private firms and analyzing their earnings stream from public and private banks. The author found that private banks that have earnings of less than zero report their losses less accurately and less willingly compared to private banks having earnings of more than zero.

Public banks actively manage their accruals compared to private banks because the relationship between cash flows and accruals is negative for publicly held banks.

Chen et al. [2010] discussed sophisticated investors as those who strictly meet the requirements of the private equity market. Their paper examined whether private equity placement data help investors to get a clear picture of the value of the firm. The authors concluded that private equity firms overstate their earnings before private equity placement because the long-term performance of the private issues depends on the earnings announcement. Firms using an aggressive earnings management approach report better long-term post-issue stock performance and operating performance.

Various studies in the literature indicate the importance of earnings quality in measuring the persistence of earnings. A study of the literature reveals research gaps because few studies have focused on the comparison between earnings quality of private equity– versus non-private equity–backed firms. Various studies (Dechow, Kothari, and Watts [1998]; Hribar and Collins [2002]; Fairfield [2006]; Katz [2009]) discuss various earning metrics and the role of persistence of accruals, providing a base for future study in the area. India has been taken as the country of analysis here because there has been no study of the Indian market in this area.

VARIABLE SPECIFICATION

Dependent Variable

- **Operating income after depreciation (OI):** This is the amount of profit earned by the company after meeting operating expenses such as wages and salary paid. It removes depreciation from gross income before operating income is computed. It is also known as *operating profit*. Companies want to increase OI after meeting their expenses. This variable is also used to compute a company's efficiency by measuring the operating margin. It is taken as a measure of a firm's earnings.

Independent Variables

- **Cash Flow:** This is the operating cash flow component of earnings, which is computed by taking the difference between the operating income after depreciation and the accrual component

of earnings. It is an important component as a measure of earnings because it indicates whether the company is able to generate positive cash flows to maintain its operations or has to raise money from external sources. It provides a clear picture about the working of a company's business operations.

- **Accrual Component of Earnings (ACCR):** ACCR is measured as the change in net operating assets from year $t-1$ to t. It is the part of the earnings that is expected to be received in the future and is computed as the change in the assets of the firm. With the inflow of private equity, we expect ACCR to increase.

Selection Variables

Dependent variable.
- **Private Equity:** This is a binary variable defined as follows:

  - PE = 1 for firms backed by private equity.
  - PE = 0 for firms without private equity.

Independent variables.
- **Book Value (BV):** This is computed as equity book value divided by the total assets of the firm. It is the total value of the assets of the firm, which the company would receive if it were liquidated.
- **Growth:** Growth is measured as growth in sales compared to the previous year's sales performance.
- **Leverage:** Leverage is measured as total debt divided by the total assets of the firm. It is a measure of the amount of debt used to finance a company's assets.
- **Cash:** This has been computed as cash and short-term investment divided by the total assets of the firm.
- **Capital Expenditure:** This has been computed as the capital expenditure of the firm divided by total assets.
- **Age:** Age is measured as the number of years since the firm was formed or its year of incorporation.
- **Size:** Size is computed as the log of total assets of the firm.

Age and size serve as the control variables in the equation. Exhibit 1 describes the actual and expected effects of the variables used in the study.

The Heckman [1979] correction procedure is used in the cases of truncation models, sample selection bias,

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Description of the Variables Used in the Study

Variables	Description	Expected Effect
Dependent		
OI	Amount of profit earned after meeting operating expenses	
Independent		
CF	Operating cash flow computed as the difference between the accrual component and the operating income	Increase
ACCR	Computed as the difference between net operating assets from year $t-1$ to t	Increase
Selection Dependent		
Private Equity	= 1 for PE-backed firms	
	= 0 for non-PE-backed firms	
Growth	Measured as growth in sales compared to previous year's value	Increase
Leverage	Computed as the ratio of total debt divided by total assets of the firm	Moderate
Cash	Measured as short-and long-term cash divided by total assets	Increase
Capital Expenditure	Measured as capital expenditure made by the firm divided by total assets	Increase
Control		
Age	Measured as number of years since incorporation	
Size	Measured as log of total assets of the firm	

and limited dependent variables, and simultaneous models with dummy variables are treated as endogenous.

ECONOMETRIC SPECIFICATION

Earnings quality is measured by computing the differential persistence of accruals relative to the cash flows of the firms. Earnings are considered to be of high quality when

- they exhibit persistence, that is, the earnings made by a firm are expected to be stable and continuing in the future.
- the earnings are unbiased, which means they are neither too aggressive nor too conservative.

Companies want earnings to exhibit persistence so that a better forecast about future earnings or cash flows can be made by the firm.

Our hypothesss is as follows: Private equity–backed firms engage in better earnings quality compared to non-private equity–backed firms.

Earnings can be considered as two different components

- Operating cash flows (CF)
- Accruals (ACCR)

Persistence is measured by the regression coefficients of the following regression equation:

$$
\begin{aligned}
OI_{i,t+1} = \alpha\ &+ \propto_1 CF_{i,t} + \alpha_2 ACCR_{i,t} + \propto_3 PE_{i,t} \\
&+ \propto_4 PECF_{i,t} + \propto_5 PEACCR_{i,t} \\
&+ \propto_6 INV\_MILLS_{i,t} + \epsilon_{i,t}
\end{aligned} \tag{1}
$$

where $\epsilon_{i,t} = \nu_i + u_{i,t}$; $OI_{i,t+1}$ denotes the operating income after depreciation for a firm i at time t; $CF_{i,t}$ is the cash flow component for earnings for firm i at time t; $ACCR_{i,t}$ is the accrual component of earnings for firm i at time t; $PE_{i,t}$ is a binary variable having a value of 1 for private equity–backed firms and 0 for non-private equity–backed firms; $PECF = PE \times CF$ is an interactive variable measuring the effect of cash flow on PE-backed firms; $PEACCR = PE \times ACCR$ is an interactive variable measuring the effect of an accrual component of PE-backed firms; and $INV\_MILLS_{i,t}$ is a control variable that is estimated from the first step of the Heckman two-stage [1979] procedure.

In Equation (1), endogeneity is present in the company's decision to choose between public and private equity. The decision to go for private equity or not, in turn, depends on a number of factors, such as the leverage, growth, profit, cash requirement, capital expenditure, size, and age of the firm.

Because of the presence of endogeneity in the decision to issue private equity, we make use of the Heckman two-stage procedure [1979]. In the first stage, leverage (measured as total debt by total assets), growth in sales, size (measured as log of total assets), cash (measured as short- and long-term investments divided by total assets), capital expenditure (measured as capital expenditure divided by total assets), age (number of years since incorporation), book value (measured as book value of equity divided by total assets), and profit act as inputs or predictors for equity choice decision in a probit model.

The estimates of the probit model provide the value of lambda, known as an inverse Mills ratio, which acts as a control variable in Equation (1), which is the second stage of the Heckman two-stage procedure.

Selection Equation

$$
\begin{aligned}
PE_{i,t} = \beta_0\ &+ \beta_1 Leverage_{i,t} + \beta_2 Growth_{i,t} \\
&+ \beta_3 Cash_{i,t} + \beta_4 Capital\ exp_{i,t} + \beta_5 BV_{i,t} \\
&+ \beta_6 Age_{i,t} + \beta_7 Size_{i,t} + \beta_8 Profit_{i,t} + e_{i,t}
\end{aligned} \tag{2}
$$

where $PE_{i,t}$ is a binary variable causing endogeneity in Equation (1) and equals 1 for PE-backed firms and 0 for non-PE-backed firms; $Leverage_{i,t}$ is a measure of the debt position of the firm; $Growth_{i,t}$ is the growth in sales of the firm; $Cash_{i,t}$ is a measure of the cash position of the firm; $Capital\ exp_{i,t}$ is a measure of the capital expenditure of the firm; $BV_{i,t}$ is a measure of the book value of the firm; $Profit_{i,t}$ is a measure of the profitability of the firm; $Age_{i,t}$ is the number of years since incorporation of the firm; $Size_{i,t}$ is a measure of the total size of the firm; and $e_{i,t}$ is an error term.

DATA

Deal data have been taken from venture intelligence regarding the number of deals made since 2005 in the private equity space. We have matched firms on the basis of total assets, making a database of private equity firms versus non–private equity firms. Although we are comparing private equity–backed and non–private equity, we have matched it on the basis of size (measured by total assets) because difference in size can account for various reporting incentives. From the top sectors for private equity investment (i.e., BFSI, healthcare and life sciences, manufacturing, information technology and information technology enabled services, and real estate), we have gathered data for 58 private equity–backed firms and matched them on the basis of size with firms in the same sectors that are not backed by PE. One private equity–backed firm has been matched with four non-private equity–backed firms. Matching was done in Stata 12. The data were sourced from Bloomberg. Stata 12 was used as the software to run the results.

Each private equity–backed firm has been matched with approximately four non-private equity–backed firms, making a total of 269 firms. The data have been collected for a time period of 10 years, 2005–2014. This makes a stronger balanced panel dataset of 2,690

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Cross-Correlation Matrix of All the Explanatory Variables

Variables	OI	ACCR	CF	PE	BV	GROWTH	LEVERAGE	CAPITAL	CASH	AGE	SIZE
OI	1.00E+00										
ACCR	1.03E–04	1									
CF	9.49E–01	0.2219	1.00								
PE	0.009802	0.0102	0.01	1.000							
BV	–0.00329	–0.0028	0.00	–0.027	1.000						
GROWTH	0.000692	0.0007	0.00	0.040	0.013	1.000					
LEVERAGE	1.57E–02	0.0011	0.01	0.113	–0.229	–0.021	1.000				
CAPITAL	–0.00984	0.0155	–0.01	–0.006	0.029	0.031	–0.016	1.000			
CASH	–0.01692	0.0082	–0.02	–0.036	0.118	0.003	–0.263	0.076	1.000		
AGE	0.025061	–0.0422	0.02	0.047	0.015	0.012	–0.010	–0.022	–0.064	1.000	
SIZE	0.009193	0.0190	0.01	0.006	0.000	0.056	0.137	0.106	–0.039	0.118	1.000

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Descriptive Statistics of the Variables

Variables	Mean	Median	Maximum	Minimum
OI	0.043058	0.12422	85.7564	–411.298
CF	0.042802	0.12454	97.94476	–411.633
ACCR	–46.4771	9.18E–06	1292.947	–124269
PE	0.211916	0	1	0
BV	0.481395	0.473951	10.06816	–18.6299
LEVERAGE	0.277092	0.243549	7.605758	0
GROWTH	4.708596	0.138495	4080.467	–1
CAPITAL	–0.06778	–0.04439	0	–0.92783
CASH	0.117091	0.056378	2.026204	0
AGE	31.0313	24	95	–5
SIZE	10.08471	10.14122	14.6298	–2.12026

firm-level observations. Operating income after depreciation is the dependent variable in the response equation, and private equity (binary variable) is the dependent variable in the selection equation.

All variables used in the study are stationary at the same level, no autocorrelation is present between the errors, and the goodness of fit test has been conducted.

Exhibit 2 shows the result of cross correlation among all the variables in the study. In the exhibit, we can see that the variables do not possess the multicollinearity problem.

Descriptive statistics of the variables reveal important information (Exhibit 3). The mean for operating income after depreciation is 4.3% over the entire period. The large difference between the maximum and minimum value of operating income signifies that some

companies in the dataset have a high operating income whereas others have a low operating income. The negative values for mean of accruals show that the major firms have lower average accruals. The large difference between maximum and minimum value of sales growth shows heterogeneity among the companies.

EMPIRICAL RESULTS

Persistence in earnings is calculated on the basis of coefficients of cash flow (CF) and the accrual component of private equity–backed firms in Equation (1). Earnings are considered to be persistent when they are stable over a period of time so that forecasting on the basis of past earnings can be done in a proper way. Exhibit 4 inputs all the variables in the selection and response equation and provides the value of the inverse Mills ratio.

The study uses matched firms, that is, private equity–versus non-private equity–backed firms, and regression has been estimated based on the matched sample of firms, controlling for the endogenous property of the binary variable (PE versus non-PE) based on the Heckman [1979] two-step procedure.

Based on the results of the equation, it can be seen that all coefficients of cash flow and the accrual component of earnings are significant, which shows that the relationship between cash flow and the accrual component of earnings has been well captured in the equation.

The main focus is on the coefficients of cash flow and the accrual component of earnings and also on the difference between these coefficients for private

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Heckman Two-Step Model Computing the Value of Mills Lambda

	Coef.	Std. Err.	z	P > |z|
OI				
CF	0.9997494	0.0013464	742.55	0.00*
ACCR	–0.0001629	0.0000145	–11.22	0.00*
BV	0.0028222	0.003603	0.78	0.433
Growth	1.22E–06	3.85E–06	0.32	0.751
Leverage	0.0006556	0.0018184	0.36	0.718
Cash	0.0009315	0.0060513	0.15	0.878
Capital	–0.0303608	0.0080596	–3.77	0.00
AGE	–0.0000108	0.0000345	–0.31	0.755*
SIZE	0.00121	0.0004756	2.54	0.011*
_cons	–0.0160152	0.0059151	–2.71	0.007*
PE				
BV	0.0323361	0.0723019	0.45	0.655
Growth	0.000525	0.0003344	1.57	0.116
Leverage	0.9296606	0.142038	6.55	0.00
Profit	0.0724648	0.2541024	0.29	0.776
Cash	–0.3461052	0.262396	–1.32	0.187
Capital	–0.2172019	0.3646906	–0.6	0.551
AGE	0.0040631	0.0014891	2.73	0.006*
SIZE	–0.055256	0.0204803	–2.7	0.007*
ACCR	0.0000839	0.0003723	0.23	0.822
CF	–0.0732424	0.2538615	–0.29	0.773
PEACCR	–0.0008872	0.0008854	–1	0.316
PECF	10.36476	0.371226	27.92	0.00*
_cons	–1.043882	0.2228864	–4.68	0.00*
Mills lambda	0.0013827	0.0007837	1.76	0.078**
Rho	0.07367			

*is significant at the 5% level of significance.

**is significant at the 10% level of significance.

equity– and non–private equity–backed firms. In the analysis, if the coefficient of accruals is less than the coefficient of cash flow, it signifies that cash flow is more persistent compared to the accrual component of earnings.

The model is run first with a simple ordinary least square (OLS) procedure, making use of a fixed and random effects model. The model was run first with random effects, and the presence of fixed effects was judged through the Hausman test. Because OLS does not consider the endogenous nature of private equity, it leads to bias and inconsistent results. The P-value of the F-statistic came out as 0.5156, signifying that the model was not explained by the explanatory variables used.

To remove this bias, the Heckman two-step procedure was followed. In the Heckman procedure, there is a response equation and a selection equation. The Heckman procedure computed the coefficients of all variables without bias.

To estimate the value of inverse Mills ratio (lambda), the Heckman equation is run again with all the explanatory variables, and Stata 12 estimates the value of lambda, which acts as a control variable in the main equation. The value of lambda was computed as 0.0013827, which is significant at the 10% level of significance. This variable is included in the first equation, and the equation is run again without the bias in the variables controlling for the endogenous nature of the private equity variable. The overall model is significant with the F-statistic equal to 1.64 and P-value equal to 0.

The results suggest that for private equity–backed firms the accrual component of earnings is more persistent compared to the cash flow component, whereas for non–private equity–backed firms the incremental contribution of the cash flow component is more persistent compared to private equity–backed firms. The inverse Mills ratio gives an idea of how an unobserved variable increases the probability of selection and results in a higher than average score for the dependent variable.

This suggests that for private equity firms, earnings quality as measured by the accrual persistence is greater compared to non–private equity–backed firms. Non–private equity–backed firms show that their cash flow component gives a better picture of earnings management compared to their accrual component of earnings.

CONCLUSION

Private equity is a source of adding value to the company and is added in qualitative and quantitative terms. Private equity investors provide the necessary capital and the required professional advice so that the company can earn high profits. Many private equity deals are being made in new sectors, such as healthcare and life sciences, education, luxury markets, fashion markets, and so on.

Earnings management and earnings quality is a very important aspect to be considered when going for private equity investment. The objective of this study was to analyze whether private equity investment leads to better earnings quality compared to non–private equity.

The results show that the cash flow component of non–private equity–backed firms is positive compared to private equity–backed firms, which has a negative impact on the earnings of the firm.

Stability or the persistence effect depends on the value of the coefficients of cash flows and accruals. For non–private equity firms, the accrual component is significant but negative, which shows that persistence of cash flow is greater compared to the accruals. Therefore, private equity–backed firms are depicting better earnings quality compared to non–private equity–backed firms based on cash flow and accrual analysis.

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