

Corporate Social Responsibility and Earnings Management: The Moderating Role of Family Ownership

Asif Saeed and Aijaz Mustafa Hashmi

National University of Modern Languages, Islamabad

Attiya Yasmin Javid

Pakistan Institute of Development Economic, Islamabad

Abstract

This study aims to explore the impact of family ownership on the relationship among corporate social responsibility (CSR) and earning management (EM) in Pakistan. Data is collected from non-financial listed firms on Pakistan Stock Exchange (PSE) for the period 2009-2017. Our results of pooled ordinary least square regression indicate that CSR has significant negative impact on EM. Furthermore, results also indicate that association between CSR and EM is moderated by family ownership. Family firms which perform CSR activities are less involved in EM as compare to non-family firms perform CSR activities. This variation in behavior of EM in family and non-family firms can possibly be explained by socioemotional wealth theory.

Keywords: Corporate Social Responsibility, Earnings Management, Family Ownership

Is EM to be more or less for companies with higher investment in CSR and owned by families? CSR level is a measurement of firms' activities for society, which provides benefits to all stakeholders, like the rise in customer's reliability and reduction in pollution (Kim & Sohn, 2013). Literature shows different results on the association between CSR and EM. Kim, Udawatte and Yin (2018), by using the data of Chinese listed firms from 2009 to 2014, find a negative association between CSR and EM, because firms decrease their management of earnings and provide high-quality financial information to their stakeholders, supporting the ethical perspective of firms. In contrary Jensen and Meckling (1976) contended that management of firms involves an increased level of social responsibility activities to improve firm reputation or to pursuit self-interest. In such firms, thus the quality of earnings tends to decrease, resulting in manipulation of financial reporting. Literature provides mixed results on the association among CSR and EM. In Korean context, Choi, Lee and Park et al., (2013) find positive relationship among CSR and EM. They conclude that to distract stakeholders from their opportunistic behavior related to EM, firms perform CSR activities. Similarly Jordaan, De Klerk and De-Villiers (2018), Prior, Surroca and Tribó (2008), Chih, Shen and Kang (2008), Salewski and Zulch (2014), Shafai, Amran and Ganesan (2018), Barton, Hansen & Pownal, (2010) and Choi and Pae, (2011) also observe positive link among CSR and EM.

Moreover, it is also reported in literature that CSR is negatively correlated with EM. Marinnez-Ferrero, Gallego and Farcia-Sanchez (2015) conducted research on a data of twenty-six countries for the period 2002–2016. They observe negative association among CSR and EM. Similar relationship is also find out by Timbate and Park (2018), Litt et al. (2014) and Hong and Andersen (2011) in the context of US firms by using different periods and data. Using the data of 10 Asian countries, Scholton and Kang (2013) also discover a negative relationship between CSR and EM. Till date results are inconclusive regarding this association among CSR and EM.

In literature, the relationship of family ownership and EM has also been discussed frequently (Achleitner, Günther, Kaserer & Siciliano, 2014; Cascino, Pugliese, Mussolino & Sansone, 2010; Lisboa, 2016; Razaque, Ali & Mather, 2016; Tian, Yang & Yu, 2018) and again diverse results have been reported. At one side, Achleitner et al. (2014), Tian et al. (2018) and Cascino et al. (2010) documented that family firms are less involved in EM activities as compare to non-family firms. On another side, Lisboa (2016) and Razaque et al. (2016) concluded that family firms are more involved in EM activities. The relationship between family ownership and EM is also inconclusive.

According to Choi et al., (2013) and Yip, Van Staden and Cahan, (2011) there may be some potential firm's internal governance factors that could be the cause of these varied results. On the contrary Hung, Shi and Wang, (2013) demonstrate that the linkage between CSR and EM is influenced via some external governance factors. In the light of above mentioned studies, family

ownership seems an important factor which might be playing a role in these dissimilar results, as family ownership can be an external as well as an internal factor. Therefore, to understand the relationship between CSR and EM, we investigate family ownership as a moderator.

The above discussion leads to a conclusion that there is a need of study on the relationship among CSR and EM in the presence of family ownership. We found two studies: Shahzad, Rehman, Nawaz, and Nawab, (2018) and Shahzad, Rauf, Saeed and Al Barghouthi, (2017) which have explored the influence of family ownership on some other variables. They explain the association between CSR and investment efficiency, and leverage and EM respectively in the presence of family ownership. They provide the evidence that family ownership mitigates the agency problem type I and enhance the agency problem type II. Therefore, the consequences of CSR on EM are not same for family and non-family firms due to the existence of agency problem. The results of the studies are however limited to above mentioned relationships between leverage and EM, and CSR and investment efficiency, respectively, through family ownership. We, on the other hand, take into consideration the broader spectrum of CSR and EM through family ownership as a moderating variable. This study thus has the following research objectives (ROs):

RO1: To investigate the association between CSR and EM

RO2: To investigate the association between CSR and EM in the existence of family ownership

To achieve above mentioned ROs, the following research questions (RQs) are put forth;

RQ1: Does CSR influence EM?

RQ2: Does family ownership moderate the association between CSR and EM?

Current study is contributing to existing literature in following ways. Firstly, while many existing studies (Timbate et al., 2018; Alsaadi, Ebrahim, & Jaafar, 2017; Moratis & van Egmond, 2018 and Masri, 2018) have explained the direct relationship among CSR and EM, this study investigate the linkage among CSR and EM by taking family ownership as a moderator. This provides more complete understanding to the investors, creditors and other stakeholders of how family ownership influence CSR activities in order to explain the EM. Secondly, the current study also examines the moderating role of family ownership on the association among CSR and EM in a country where majority of firms are family owned (Tahir & Sabir, 2014) and the monitoring mechanisms of management are not efficient and provide an opportunity for family block holders to tunnel the wealth of minority shareholders.

In this study, we use the data of listed non-financial firms on PSE over the period 2009-2017, to investigate the relationship between CSR and earning management for family and non-family firms. We select Pakistan for this study, because majority of firms are owned by families (Tahir & Sabir, 2014) and characteristics of Asian family firms are different from the characteristics of US and EU family firms (Lin, Wang & Pan, 2016). Moreover, family owned businesses in Asian countries are more involved in EM (Ding, Qu & Zhuang, 2011; Razaque et al., 2016). Furthermore, CSR is a somewhat new concept in Pakistan. SECP issued guidelines for CSR activities to encourage corporate sector social activities because Pakistan stands at 146th in the world on HDI, so requires more CSR from the corporate sector.

We document that CSR is negatively associated with EM. Moreover family owned firms which perform CSR activities are less involved in EM as compared to non-family owned firms. This result indicates that family firms which perform CSR activities are more responsible in providing fair financial performance and financial position information of the firm to all stakeholders as compared to non-family firms. Rest of the study proceeds as follow: Section 2 provides literature review, section 3 discusses data and methodology, section 4 sheds light on results and section 5 concludes the study.

Literature Review and Development of Hypothesis

This study addresses the question of how family ownership affects the association between CSR and EM. Literature has discussed the association of CSR and EM and stated different results. But little attention is given in the literature to the moderating role of family ownership on the association among CSR and EM which may be the cause of different results of CSR and EM especially in developing countries where monitoring mechanism is inefficient. In next section we discuss the affiliation among CSR and EM.

Corporate Social Responsibility and Earning Management

Literature provides mixed results on the relationship between CSR and EM. At one pole literature provides evidence that there exist positive association between CSR and EM (Prior et al., 2008; Jordan et al., 2018; Choi et al., 2013). Choi et al. (2013) conducted research on Korean listed firms and provide evidence that Korean firms perform CSR activities to hide their opportunistic behavior. South African firms also do CSR activities to neutralize bad public opinion about

management regarding EM (Jordaan et al., 2018). Their results follow the management opportunism behavior hypothesis. Prior et al. (2008) also conclude positive relationship between CSR and EM in 26 different countries. According to them managers perform CSR activities to defuse stakeholder activism against EM behavior of management.

Further Chih et al. (2008) concluded that firms belonging to rich countries which perform CSR activities are more involved in EM activities as compared to firms which do not perform CSR activities. They conclude that to hide opportunistic behavior regarding EM, management of firms perform CSR activities. Similarly, Salewski and Zulch (2014); Shafai et al., (2018); Barton et al., (2010) and Choi and Pae (2011) also find negative impact of CSR activities on earning quality proxied by earning management.

On the other end, literature provides evidence that there exists negative association among CSR and EM, supporting ethical viewpoint (Bozzolan, Fabrizi, Mallin & Michelon, 2015; Marinnez-Ferrero et al., 2015). Marinnez-Ferrero et al. (2015) conducted research on the data of twenty-six countries for the period 2002-2016 to check the bidirectional association among CSR and EM. By applying GMM they concluded that CSR performance has negative impact on EM and their results support stakeholder theory. Timbate et al. (2018) also conducted research on S&P 500 US firms and concluded that firms which perform CSR activities are less involved in EM. According to Yip et al. (2011) and Choi et al. (2013) there may be some potential firm's internal governance factors that might be the cause of these mixed results. On the other side Hung et al. (2013) demonstrate that the association between CSR and EM depends on external governance environment. Based upon the above discussion, following hypotheses have been formulated.

H₀₁: Higher the CSR performance results, lower the EM.

H₀₂: Higher the CSR performance results, higher the EM.

Family Ownership as a moderator

In literature, researchers provide different definition of family business. Anderson and Reeb (2003) consider a firm as a family firm if the establishing business family own common shares of the business and any person belonging to the family is also a part of board of directors. Miller, Breton-Milles, Lester, and Cannella, (2007) also provide a very similar definition of family business. Miller et al., (2007) define a business as family business if family members are majority shareholders and also a part of board of directors. But the definition of Chua, Chrisman and Sherma, (1999) is broadly acknowledged by researchers in this regard. Chua et al., (1999) define the term family firm by covering the behavioral aspects which include different attributes of family business like, family ownership, presence of family on board and in executives, and the objective behind above mentioned attributes is family succession. Intention of family members to keep family involvement in ownership, management and in governance is to transfer the business to their next generation (Anderson et al., 2003). Consequently in addition to financial goals, family firms also consider non-financial goals while they are deciding about different business choices. Non-financial goals are known as socio-emotional wealth (SEW) (Gomez-Mejia, Haynes, Núñez-Nickel, Jacobson & Moyano-Fuentes, 2007). Based on previous discussion and literature we consider one factor of internal governance mechanism of the firm that may affect the association between CSR and EM. Based on SEW theory family owners are more concerned to achieve non-economic goals over economic goals hence perform more CSR activities and less EM to preserve their socio-emotional wealth (Gomez-Mejia et al., 2007). But on contrary type II agency problem argues that management of family firms tunnel the wealth of minority shareholders and manage earnings to show the strong financial position and financial performance of firm (Shahzad et al., 2017). To maintain their image in society and to hide their EM activities, family firms may perform more CSR activities. So based upon the above discussion we hypothesize that:

H_b: Family Ownership moderates the association of CSR and EM

Research Methodology

Data

The objective of this study is to check the influence of family ownership on the association among CSR and EM of both types i.e. accrual-based EM and real EM in Pakistan where majority firms are family firms (Tahir & Sabir, 2014) and where governance rules are inefficient. Data of publicly listed companies (excluding financial firms) on PSE for the time period 2009-2017 is used. Following prior studies (Prior et al., 2008 and Gras-Gil, Manzano & Fernández, 2016), financial firms are excluded from the sample because their regulatory bodies and investment pattern are different from non-financial firms. We also exclude the firms which are not listed continuously throughout the study period. Financial data is collected from the Compustat data stream and data

related to family ownership and CSR is collected from annual reports of firms. The sample is a balanced panel of 182 firms over 9 year period.

Model Specification

Following Achleitner et al. (2014) and Cascino et al. (2010), to test the hypothesis that either family ownership moderate the association among CSR and EM in Pakistani listed non-financial firms, we employed the following model:

$$EM_{i,t} = \beta_1 + \beta_2 CSR_{i,t} + \beta_3 FOWN_{i,t} + \beta_4 LEV_{i,t} + \beta_5 AQ_{i,t} + \beta_6 Age_{i,t} + \beta_7 ROA_{i,t} + \beta_8 Growth_{i,t} + \beta_9 Loss_{i,t} + \epsilon_{i,t} \dots (1)$$

Where

EM = Earning Management proxied by real and accrual-based EM

CSR = Corporate Social Responsibility

FOWN = Family Ownership

LEV = Leverage and measured as debt to total assets

AQ = Audit quality coded '1' when the firm is audited by big 4 auditors otherwise '0'

Age = Listing number of year of firm

ROA = Return on assets

Growth = Growth opportunity and proxied by the market to book value of firm

Loss = Dummy variable coded '1' when net income is negative and '0' otherwise.

β_1 is constant of regression, $\beta_2, \beta_3, \beta_4, \dots, \beta_9$ are coefficients of independent variables

ϵ = Error term, subscript i and t denote i^{th} observation and time t

Measurement of Variables

Dependent Variable

Managers employ different techniques of EM to manipulate the end result of income statement i.e. net income after tax, like change in depreciation expense (Darrrough, 1998), manipulate sales through sales discount (Roychowdhury, 2006), decrease in discretionary expenditures like research and development expenses, selling general and admin expenses (Roychowdhury, 2006), and sale of assets (Herrmann, Inoue & Thomas, 2003). Broadly these techniques are categorized into two groups, accrual-base EM (ABEM) and real EM (REM). Following are the measurement of EM.

Real earning management (REM)

Management of firms has different operating options to manage earnings without disrupting discretionary accruals (Roychowdhury, 2006). Roychowdhury (2006) identified three basic techniques to manipulate earning. First, a firm can increase sales through sale discount and /or more lenient credit terms. This leads to a decrease in the normal level of operating cash flows of the firm. The difference between normal cash flow from operations and decrease in operating cash flow due to sale discount and lenient credit term is abnormal operating cash flows. Following Roychowdhury (2006), normal operating cash flows are estimated by using the following equation:

$$OCF_t = \alpha + \beta_1 Rev_t + \beta_2 \Delta Rev_t + \epsilon_t \dots (i)$$

Where

OCF_t = firms operating cash flows at time t

Rev_t = Revenue of the firm at time t

ΔRev_t is change in sales revenue from time t-1 to t.

The difference between actual operating cash flow and normal operating cash flows are abnormal cash flows.

$$Ab-OCF = \text{Estimated normal operating cash flows} - \text{Actual operating cash flows}$$

Secondly, management can also increase earnings by increasing the production level abnormally. Generally, due to the increase in production per unit fixed cost decreases, which leads

to a decrease in total cost per unit, hence increase in earnings of the firm. Abnormal production cost is the difference in the normal level of production cost and actual production cost. Following Roychowdhury (2006) the normal level of production cost is estimated by applying the following model:

$$P.Cost_t = \alpha + \beta_1 Rev_t + \beta_2 \Delta Rev_t + \beta_3 \Delta Rev_{t-1} + \varepsilon_t \text{ -----(ii)}$$

Where

- P.Cost_t = Production cost at time t
- Rev_t = Revenue of the firm at time t
- Δ.Rev_t = Change in Revenue from time t to t-1.
- Δ.Rev_{t-1} = Change in Revenue from time t-1 to t-2

Thirdly, management can increase earning by decreasing discretionary expenditures like R&D, selling, general and admin expenses and advertisement expenses. This decrease in discretionary expenditures by management from the normal level of discretionary expenditures is abnormal discretionary expenditures. By following Roychowdhury (2006), normal levels of discretionary expenditures are estimated as follows:

$$D.Expn_t = \alpha + \beta_1 Rev_{t-1} + \varepsilon_t \text{ ----- (iii)}$$

Where

- D.Expn_t = Discretionary expenses at time t
- Rev_{t-1} = Sales revenue at time t-1.

Following Kim et al. (2013) and Achleitner et al. (2014), we construct an aggregate measure of real earning management as:

$$REM = (-1)*Ab-OCF + Ab-PCOST + (-1)*Ab-DEXP \text{(iv)}$$

Where

- REM = Real EM
- Ab-OCF = Abnormal level of operating cash flows
- Ab-PCOST = Abnormal production cost
- Ab-DEXP = Abnormal discretionary expenditures

Accrual-based earning management (ABEM)

Management can also manipulate earnings through discretionary accruals. Discretionary accruals are the difference between total accruals and non-discretionary accruals. Like Kim et al. (2018), Li et al. (2018) and Lisboa (2016), we calculate discretionary accrual by applying performance-based Jones model modified by Kothari et al. (2005), where total accruals are the difference between net income and operating cash flows. Following is the model:

$$TA_t = \alpha + \beta_1 \Delta Sales_t + \beta_2 PPE_t + \beta_3 ROA_t + \varepsilon_t \text{ ----- (v)}$$

Where

- TA_t = Total accrual measured as the difference between income before extraordinary items and cash flow from operations of firm in year t,
- ΔSales_t = Change in sales from year t to t-1,
- PPE_t = Net amount of property plant and equipment in year t,
- ROA_t = Return on assets in year t

All variables of equation (i), (ii), (iii) and (v) are divided by lagged total assets to standardize all variables.

Independent Variables

Family Ownership

In this study, we use two proxies of family firms. Similar to Chu (2011) and Anderson et al. (2003), in first proxy family firms are measured as a percentage of shares owned by family members which is a continuous variable. The second proxy of family firms is a dummy variable. Following Attige et al. (2015), we code '1' if family block holders hold 50% or more than 50% of the total number of shares outstanding and '0' otherwise.

Corporate Social Responsibility

We use two measure of firms CSR performance for the current study. First one is the CSR index and second one is the amount spent on CSR activities. Second measure is used for robustness. Akin to Haniffa and Cooke (2005), Ghazali (2007), and Khan et al. (2012), we use four categories related to Pakistani firms to measure CSR index: Community Involvement, Environmental, Employee Information, and Product and Service Information. Information related to the above-mentioned categories is collected from annual reports of the firms from 2009 to 2017. We use an unweighted scoring method to count items involved in the index. Hereafter, a dichotomous method is used. We assign 1 to the item if that item is found in the report and 0 otherwise. In the next step we add a score of each item and divide the total score of a company with the total number of items included in the index. Under this index, a firm can attain maximum score 1 (or 100%) and minimum 0. A higher value of index shows more degree of disclosure. Further detail of index calculation is provided in appendix A.

Control Variables

Based upon previous studies (Alchleitner et al., 2014; Lisboa, 2016; Tian et al., 2018) to control the impact of other variables on EM, we also include a set of variables as control variables. Control variables include: leverage (Alchleitner et al., 2014) measured as debt to total assets, audit quality (Lisboa, 2016) proxied by big four auditors, age of firm (Tian et al., 2018) measured as log of number of years of incorporation, growth opportunity (Kim et al., 2018) proxied by market to book value and presence of loss (Masri, 2018) proxied by a dummy and coded as '1' if net income is negative, otherwise '0'.

Results and Discussion

Univariate Analysis

Table 1 shows the differences of means of variables between family and non-family owned business. Family owned business show a low level of real EM than non-family business and more accrual earing management. This result is in line with the SEW theory's dynastic succession dimension. Family firms want to pass through their business to their next generation (Cennamo, Berrone, Cruz & Gomez-Mejia, 2012), so do manage earnings through discretionary accrual instead of operating activities, because real EM has a negative impact on the future performance of business (Gunny, 2005). Results also specify that family owned firms are more involved in CSR activities (50.09%) as compared to non-family owned firms (40.3%).

This result is also in accordance with other dimension of SEW theory i.e. family identity (Cennamo et al., 2012). The univariate analysis further added that family owned firms have lower audit quality (63.03%) as compared with their counter firms (77.65%) and this result is in harmony with Darmadi (2016). This result also explains the higher level of accrual-based EM by family firms as compared to non-family firms. Table 1 also indicates that means of other control i.e. size, leverage and market to book value are also significantly different for family and non-family owned firms.

Table 2 presents the pairwise correlation of EM proxies, CSR, Family ownership, and other control variables. Results of table 2 show negative association between CSR and accrual EM, while family ownership has positive association with accrual EM. But on the other side family ownership is negatively correlated with real EM and CSR. Table 2 also depicts that multicollinearity does not exist among independent variables.

Table1: *Difference of means for Family and non-family firms*

Variables	Family firms	Non-family firms	t-test Values
Real EM	-2.863	-1.226	4.053***
Accrual base EM	0.846	0.517	-2.993***
CSR Index	50.09%	40.3%	9.210***
CSR Amount	6.127	5.653	2.297**
Size	8.201	8.888	8.737***
Lev	9.713	35.492	7.861***
ROA	0.903	0.602	-0.945
Growth	1.181	4.351	9.589***
Audit Quality	63.03%	77.65%	6.008***

*, **, *** denote level of significance at 10%, 5% and 1% respectively.

Table 2: Pairwise Correlation

	AEM	REM	CSR	FOWN	LEV	AQ	Age	ROA	Growth	Loss
AEM	1									
REM	-0.916***	1								
	0									
CSR	-0.099***	-0.134***	1							
	0	0								
FOWN	0.078***	-0.106***	-0.222***	1						
	0.003	0	0							
LEV	-0.064**	-0.106***	0.108***	-0.191***	1					
	0.015	0	0	0						
AQ	0.065**	0.058**	0.019	-0.147***	0.099***	1				
	0.014	0.027	0.44	0	0					
Age	-0.072**	-0.062**	0.151***	0.032	0.029	-0.090***	1			
	0.006	0.018	0	0.202	0.236	0				
ROA	0.323***	0.313***	-0.087***	0.023	-0.039	-0.056**	0.022	1		
	0	0	0	0.345	0.119	0.024	0.364			
Growth	0.158***	0.163***	0.184***	-0.231***	-0.068**	-0.04	0.094***	0.054*	1	
	0	0	0	0	0.006	0.104	0	0.028		
Loss	0.116***	0.096***	-0.235***	-0.013	0.065*	0.086***	-0.087***	0.046*	-0.058**	1
	0	0	0	0.602	0.009	0	0	0.065	0.018	

*, **, *** denote level of significance at 10%, 5% and 1% respectively.

Multivariate Analysis

Corporate Social Responsibility and Real Earning Management

Table 3 presents the pooled OLS regression results of CSR on real EM. Column 1, column 2 and column 3 present the result for full sample, family firms, and non-family firms respectively. Column 1 depicts that CSR is negatively and significantly associated with real EM supporting our first hypothesis H_{a1} that higher the CSR performance lower the EM (real EM). These results are similar to the results of previous studies (Cho & Chun, 2016; Kim et al., 2018; Liu et al., 2017; Timbate et al., 2018). These results support that firm perform more CSR activities behave in responsible way to restrict EM through real EM and deliver more transparent and reliable financial information to the user of financial reports like investors, creditors and other stakeholders.

Table3: Pooled OLS regression of CSR on real EM

	Full Sample. Column.1	Family Firms Column.2	Non-Family Firms Column.3
CSR	-2.982*** (0.900)	-4.628*** (1.103)	-4.056*** (1.269)
FOWN	-2.053*** (0.402)		
LEV	-0.006** (0.003)	-0.015* (0.008)	-0.005** (0.002)
AQ	1.469 (0.382)	1.285 (0.461)	-0.026 (0.546)
Age	-1.082** (0.440)	-2.044*** (0.577)	-1.365*** (0.520)
ROA	0.398*** (0.033)	0.387*** (0.038)	0.388*** (0.053)
Growth	0.216*** (0.028)	0.929*** (0.066)	0.027 (0.023)
Loss	1.251*** (0.437)	1.834*** (0.544)	0.113 (0.572)
Constant	4.053** (1.602)	9.065*** (2.079)	1.244 (1.812)
Observations	1,446	973	473
R-squared	0.170	0.283	0.177

*, **, *** represent level of significance at 10%, 5%, 1% respectively.

Column 1 also displays that family ownership has a significant negative impact on real EM. This result is also in accord with previous studies of Tian et al. (2018), Shahzad et al. (2018) and Achleitner et al. (2014), suggesting that family ownership discourages real EM to preserve their SEW (Achleitner et al., 2014). Column 2 and 3 of table 3 show that coefficients of CSR for family and non-family firms are -4.628 and -4.056 respectively are different, which demonstrates the influence of family ownership on the relationship among CSR and EM, supporting hypothesis H_b that family ownership moderates the association of CSR and EM (real EM), suggesting that family-owned firms which perform CSR activities are considered more responsible as compared to non-family firms.

Control variable leverage also has a negative and significant impact on real EM and this result is parallel to the findings of Zamri, Rahman and Isa, (2013) supporting the alignment view of agency theory (Jensen, 1986). Age of firm also has a significant negative impact on real EM indicating that, as firms are going mature they are less involved in real EM. This finding is similar to the outcomes of Liu et al. (2017). Results of other control variables are also alike Liu et al.'s (2017).

Corporate social responsibility and Accrual-based earning management

Table 4 presents the pooled OLS regression results of CSR on accrual-based EM for full sample, family firms and non-family firms. Column 1 presents the result of full sample, while column 2 and 3 present results for family and non-family firms. Results of column 1, 2 and 3 show that CSR has a significant negative impact on accrual-based EM. This result verifies that firms more involved in CSR activities act in an accountable way and are less involved in accrual-based EM, supporting our hypothesis H₃₁. Analogous results are also documented by Cho and Chun (2016), Gras-Gil et al., (2016) and Alasadi (2017). Column 2 and 3 depict that the coefficient of CSR for family (-4.628) is different from the coefficient of CSR for non-family (-4.056), which indicates the influence of family ownership on the relationship between CSR and EM, signifying that family-owned firms that perform CSR activities are more responsible than non-family firms.

Column 1 indicates that family ownership has a positive and substantial impact on accrual-based EM. Similar results are also documented by Achleitner et al. (2014), Cascino et al. (2010), Shahzad et al. (2017), and Yand (2012). This result demonstrates that in developing countries, due to inefficient implementation of governance rules, family owners expropriate the wealth of non-family owners indicating the existence of type II agency problem. Age is negatively and significantly associated with accrual-based EM for family firms but not for family firms. On the other side growth and loss have a significant positive impact on accrual-based EM for family firms but no significant impact for non-family firms and these results are in consensus with Liu et al. (2017).

Table 4: Pooled OLS regression of CSR on accrual-based EM

VARIABLES	Total Sample	Family Firms	Non-Family Firms
	Column.1	Column.2	Column.3
CSR	-0.443* (0.245)	-0.824*** (0.312)	-0.774** (0.294)
FOWN	0.496*** (0.109)		
LEV	-0.001 (0.001)	-0.002 (0.002)	-0.000 (0.001)
AQ	0.388*** (0.104)	0.358*** (0.130)	-0.022 (0.127)
Age	-0.362*** (0.120)	-0.552*** (0.163)	0.192 (0.121)
ROA	0.113*** (0.009)	0.115*** (0.011)	0.095*** (0.012)
Growth	0.055*** (0.008)	0.242*** (0.019)	0.007 (0.005)
Loss	0.455*** (0.119)	0.626*** (0.154)	0.082 (0.133)
Constant	1.288*** (0.436)	2.342*** (0.587)	0.200 (0.420)
Observations	1,446	973	473
R-squared	0.165	0.268	0.166

*, **, *** represent significance at 10%, 5%, 1% respectively.

Discussion and Conclusion

This study examines the influence of family ownership on the relationship between CSR activities and EM of both types i.e. real and accrual in Pakistan. We use a sample of non-financial listed firms on PSE over the period of 2009 to 2017. Results of the study indicate that family ownership influences the relationship of CSR and EM in Pakistan. This result demonstrates that family firms which perform CSR activities are more responsible for providing fair financial performance and financial position of the firm to all stakeholders as compared to non-family firms.

Results of the study also validate that a higher level of CSR decreases both types of EM in family non-family firms. This implies that companies, either family or non-family, with a high level of CSR behave in a responsible manner to deliver more transparent and reliable financial information to all stakeholders and the result is in agreement with the findings of Kim et al. (2018) and Timbate et al. (2018). The results also suggest, the impact of CSR is more negative on EM in family firms as compared to non-family firms. Furthermore, the findings of the study are in harmony with the socioemotional wealth theory, which states that family firms prefer non-financial goals over financial goals.

The results of the study provide vital suggestions for theory and practice. The negative relationship between CSR activities and EM (real and accrual) advocates that the implementation of CSR related rules can be a good strategy to curb the opportunistic behavior of management hence aligning the interest of management and owners either from family or non-family. The CSR performance can also be a good tool to enhance the shareholders believes in the firm's management of family and non-family firms, that management provides a higher level of financial information if CSR performance is higher. CSR performance can also be a good tool to improve the firm image in society. CSR performance can be a good strategy to reduce the information gap between management and stakeholders in developing and less regulated markets.

This study also has some limitations hence providing directions for further research. In this study, we only use one governance mechanism as a moderator i.e. family ownership. First, there may be other governance mechanisms that potentially moderate the relationship between CSR performance and EM, like board gender diversity. According to Zalata, Ntim, Aboud and Gyapong, (2018) female members on board reduce the EM. So it will be interesting to study the association among CSR and EM in the presence of female directors on board. Secondly, this study considers only Pakistan, where monitoring mechanism is inefficient, so future research may consider this relationship in countries where monitoring mechanisms are efficient.

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Appendix A:

CSR calculation method

Corporate Social Responsibility Score/Index (CSRS) is utilized as dependent variable to proxy CSR activities which are disclosed in companies' annual reports. The study uses a modified Index which includes items relevant to Pakistani firms; the index is adopted from Haniffa and Cooke (2002, 2005), Ghazali (2007), Khan et al. (2012), and KLD database. The Index contains scores for the four categories: (1) Community involvement; (2) environmental; (3) employee information; and (4) product and services information.

We have employed an unweighted scoring methodology in this study to score items included in the index. Hence, a dichotomous method is applied. If an item is disclosed in annual report it has a score of 1 otherwise 0.

The Corporate Social Responsibility Score (CSRS) is calculated by computing the ratio of actual scores awarded to the total number of items for each company. The value of index can range from zero to one. The higher score shows the greater extent of disclosure.

Corporate Social Responsibility Index

CSR Disclosure Items (20)

A. Community Involvement

1. Charitable donations
2. Support for housing (infrastructure)
3. Community program (Health and Education)

B. Environmental

1. Environmental policies
2. Recycling
3. Pollution prevention

C. Employee Information

1. Number of Employees/Human resource
2. Employee profit sharing
3. Strong retirement benefits
4. Worker's occupational health and safety
5. Employee training and development
6. Employee Welfare
7. Employees Relations
8. Child labour and related actions

D. Product and Service Information

1. Product quality and safety
2. Customer Award/Rating Received
3. Product development and Research
4. Types of products disclosed
5. Focus on customer service and satisfaction
6. Value added statement