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# An Empirical Investigation on Ownership Structure and Earnings management: Evidence from PSX and FTSE-350 Listed Firms

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**Abstract:** The current research aims to highlight the impact of ownership structure on real earnings management by comparing the firms listed on Pakistan Stock Exchange and London Stock Exchange. The secondary data of 167 Pakistani and 233 UK listed firms is analysed from 2011-2019. The results obtained for both countries shows that ownership structure influences the real earnings management. The results also suggest that real earnings management practices are significantly different in big and small size firms. Further, the impact of ownership structure on real earnings management among the big and small sized firms is different. The results of the study are helpful to the policymakers in reducing the real earnings management. The limitations and future aspects are also elucidated comprehensively.
**Keywords:** *Concentrated ownership, Institutional ownership, Managerial ownership, Real Earning Management*

## Introduction

The previous empirical studies suggest that the concentration of largest shareholders and their dominant presence in the ownership structure is not detrimental, rather beneficial to the minority shareholders and the overall firm. These studies showed that earnings management for manipulating earnings had played a significant role in contributing to massive corporate scandals, including WorldCom and Enron (Shi, Connelly, & Hoskisson, 2017; Schnatterly, Gangloff, & Tuschke, 2018). However, another argument presented by particular academics recommends that every type of earnings management is not attempted for opportunistic purposes. This notion is supported by the gigantic scandals that created a negative perception about the usage of earnings management (Ronen & Yaari, 2015).
Considering the viewpoint of agency theory, it is suggested that sometimes the agency issue between shareholders (in case of independent ownership and control) and management may

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develop motivation and intention among managers to indulge in opportunistic earnings management activities for their benefit (such as bonus or compensations associated with earnings). Hence, corporate governance mechanisms are seen to play a primary role in reducing conflict of interest and preventing managers from engaging in opportunistic behaviours.

Existing literature has primarily focused on the investigation of the ownership structure, board of directors and its role in limiting the misuse of earnings management (e.g. Nguyen, 2020; Abbadi, Hijazi & Al-Rahahleh, 2016; Chen, Cheng & Wang, 2015). Moreover, other studies, such as Dechow et al. (1996), found that whether financial misstatement and associated fraudulent activities are an outcome of poor corporate governance or not. Nonetheless, there is still little known about the impact of ownership structure on managers' earnings management activities in developed and developing economies.

The current study explores the phenomenon mentioned above and develops realistic evidence that describes the role of ownership structure and board composition on managers' accounting discretion activities. It is argued by Enomoto, Kimura, & Yamaguchi (2015) that if there is a agency issue between dominant and minority shareholders, it may motivate the dominant ones to indulge in opportunistic earnings management. In accordance with the findings of other research, this study also looks at the effect of powerful shareholders on managers' accounting judgement.

Additionally, accounting systems and investor protection, are supposed to be strong in developed economies but less efficient and effective in other developing economies. However, the high-profile reforms concerning the code of corporate governance in the UK and Pakistan provide an opportunity for the current study to research the role of strong governance mechanisms in limiting earnings management as an opportunistic activity by minimizing the conflicts of interest. The current study has its contribution to the existing literature in several ways, as follows.

First of all, according to the literature, a difference in the structure of corporate governance in firms might be associated with the quality of reported earnings. Since managers are likely to influence the quality of financial reporting, firms having a concentrated ownership structure are more likely to be dominated by larger shareholders having significant dominating control over the firm. Furthermore, the majority of the studies in this regard are found to be conducted in the context of US and European countries, which is perceived to hold suitable corporate governance mechanisms and high accounting standards (e.g., Kim, Kim, & Lim, 2019; Bajra, &Cadez, 2018; Tangjitprom, 2013). Other than these, only a few studies based their research on emerging markets, where ownership structures are highly concentrated instead of being dispersed (e.g. Maswadeh, 2018; Orazalin, (2019); Almarayeh, Aibar-Guzman, & Abdullatif, 2020). Thus, empirical evidence provided by this research study will add to the existing literature on emerging markets.

Secondly, Menicucci (2020) research asserted that it is not only the accounting standards that the law requires but also the incentives for the makers of financial reports that determine the earnings quality. In the case of high ownership concentration, the dominant and large shareholders influence the managers to prepare financial reports. Therefore, the current study investigates to analyze the influence of different types of shareholders on earnings management. It adds to the already available literature regarding the role of various shareholders in managing the earnings quality concerning high ownership concentration in countries like Pakistan. Moreover, this study can also contribute to improving accounting standards for the regulators and accounting standards' setters to ensure that standards and objectives comply with each other.

Finally, literature reports an ongoing debate in studies over the correct measurement of the magnitude of earnings management. Many of the studies focused on earnings accruals as a

significant source of earnings management. On the other hand, some studies suggest that auditors act more vigilant in the presence of a robust regulatory framework and prefer real earnings management instead of accrual-based methods (Inayah & Prasetyo, 2021). Therefore, the current study applies real earnings management for measuring the extent of managers' accounting discretion practices. The purpose of the study is to capture the influence of ownership structure of big and small size companies on real earning management.

## Literature Review

To divide a firm's cash flow, contract parties develop an initial agreement that defines the division of cash flows (Fama and Jensen, 1983; Dichev et al., 2013). However, the contract parties have rational self-interests that may limit them from agreeing on transferring wealth from one party to another. Thus, it is impossible to develop complete contracts, and agency costs may follow the parties in case of any breaches (Beyer, Cohen, Lys, & Walther, 2010).

According to Aygun & Sayim (2014), it is argued that ownership structure affects the nature of accounting practices and the flow of information. For example, in firms having dispersed ownership, the manager performs the role of an owner's steward. Thus, it is reasonable that the managers may favour their self-interest and affect the relative distribution of cash flows among the shareholders.

For minimizing the conflict of interest among shareholders, the rational shareholders ask for incentives and other monitoring contracts so that they can monitor the activities of managers and reward them with incentives if they align their interests with those of the shareholders (Kim, Kim, & Lim, 2019; Ronen and Yaari, 2008). This demand of rational shareholders emphasizes the importance of accounting information (stewardship) for constraining managers acting on shareholder's behalf (Armstrong et al., 2010). Hence, in different types of contracts (e.g. debt contracts or management compensation contracts), the accounting numbers are seen as key performance indicators (Nguyen, 2020). On the other hand, if managers have complete control over accounting data and utilise them for personal gain, contracts based on such figures may not always be adequate to align the interests of managers with those of shareholders (Hijazi, & Al-Rahahleh, 2016).

An ex-ante contract can constrain managers from choosing accounting methods from accepted accounting standards. The other contract parties allow managers to have discretion in some accounting practices, rather than all (Inayah & Prasetyo, 2021). Howevers, ownership structure which is concentrated, usually have a dominant shareholder acting as an owner who exercises control. It leads to the occurrence of fewer conflicts among managers and shareholders. In reality, the dominant shareholders usually have their participation in operating the firm, either through management positions or the selection process of managers (Armstrong et al., 2010). It allows the shareholders to exercise their influence on distributing cash flows among parties involved in the contract (Chen, Cheng, & Wang, 2015).

There is another kind of conflict of interest that firms with a concentrated ownership structure may face, i.e. the conflict between the interests of dominant and minority shareholders. In this case, accounting information in stewardship does not play such an essential role as it played in the case of diverse ownership. The argument put forth by Chen, Cheng, & Wang (2015) stated that for firms having concentrated ownership, the accounting information is limited to the public. It is because dominant shareholders mainly depend on private information sources. In most cases, the efficient control of dominant shareholders enables them to exercise influence on its accounting policies. This conflict may be recognized by the minority shareholders, who may therefore not

regard the reported accounting numbers, thinking that the numbers must have been manipulated according to the self-interests of dominant shareholders. As a result, the share prices may be lowered by the minority shareholders, thus demanding high-quality accounting information to mitigate exploitation risk by managers and shareholders (Kim, Kim, & Lim, 2019). It may also create pressure to adopt internationally accepted accounting standards for improving corporate transparency in firms having concentrated ownership environments, e.g. Asian countries.

**Ownership Concentration and Earnings Management**

The prior literature suggests an impact of shareholders' ownership level on the extent to which interests are aligned between managers and shareholders. In this respect, two competing viewpoints discuss how earnings management by managers is affected by incentive effects.

According to the first view on the alignment effect, it is suggested that controlling shareholders are highly motivated and possess a more remarkable ability to participate in the firm's monitoring process than minority shareholders (Jensen and Meckling, 1976). This view is that minority shareholders face the danger of their wealth is reduced in case of mismanagement of earnings. There are also many cases where dominant shareholders also gain considerable control over a firm's operations. This happens when their share proportion passes a particular threshold (e.g. 20% or 25%). Thus, in case of high ownership levels (determined by cash flow rights), the personal benefits by dominant shareholders may be prevented because of high costs (Schnatterly, Gangloff, &Tuschke, 2018). Moreover, the high ownership concentration can also be regarded as a "credible commitment" for the minority shareholders.

Hence, it is suggested by the alignment effect that if the ownership concentration increases to reach a particular threshold, it may reduce conflicts of interest between majority and minority shareholders. This happens when the shareholders are motivated to monitor a firm's financial reports effectively and constrain the opportunistic practice of earnings management by managers. Nonetheless, according to Bajra & Cadez (2018), increasing ownership concentration levels may also lead to entrenchment effects that ultimately allow the dominant shareholders to pressure managers to report the firm's performance in their interest while generating cost for other shareholders. Similarly, to gain benefits, the shareholders may also exploit the corporation's financial resources (assets), e.g. "self-dealing transactions" to transfer profits to the shareholder's private firms. This type of asset exploitation follows less cost than potential benefits.

Regarding earnings management, it is expected that controlling shareholders significantly influence the preparation of financial reports through their sufficient control over the firm. The dominant shareholders may also restrict the information flow to public access to avoid the associated political costs and hide their exploitation practices of the corporate assets, thus reducing transparency and misleading the minority shareholders (Dichev et al., 2013). Therefore, it is predicted by the entrenchment effect that increase in the concentration of ownership structure gives rise to managers' opportunistic behaviour regarding earnings management.

The literature presents limited and mixed evidence in this regard. For instance, Azofra et al. (2003), in their study on Spanish listed firms, found that large shareholders play an active monitoring role that reduces the conflict of interest over choices of accounting policy.

Likewise, Shi, Connelly & Hoskisson (2017) emphasized that there is an impact of outside block-holders in managing a firm's discretionary accruals in the US. The study concluded that when firms are expected to experience a decline in earnings, they tend to indulge in income increasing earnings management practices.

On the other hand, the results also showed a positive association between ownership of outside block-holders (less than or equals to 5%) and the discretionary accruals. Thus, it supports the entrenchment effect where the presence of outside managers increases the pressure to report high earnings.

Farooq et al., (2012) studied firms listed in the Casablanca Stock Exchange (Morocco) and found a negative influence on discretionary accruals' largest shareholders' presence. However, they found no significant association between the absolute value of discretionary accruals and ownership of largest shareholders.

Concludingly, it is found that literature suggests that in the presence of ownership concentration, not only the interest of different stakeholders is aligned, but it also results in the improvement of firm performance. As a result, this study puts forth theories based on the alignment effect that contend that lower earnings management is caused by more ownership concentration.

**H1:** Consternated ownership impacts negatively on earnings management.

**Institutional ownership and Real Earnings Management**

Although there is limited research on the effect of institutional investors on earnings management, there are studies on corporate governance and performance, which offers some insight into the role of institutional investors and their motivation in monitoring managers.

Studies suggest that the degree of monitoring by institutional investors is influenced by many factors, including independence (Bena et al., 2017) and the long-term or short-term investment objectives. According to Liu et al., (2018), considerable shareholdings prevent institutional investors in short-term investments, thus increasing incentives for active participation in monitoring activities.

However, the argument of Manogna, Mishra, & Sinha (2020) supported that it is costly to monitor. Therefore, large shareholding institutional investors are more likely to be involved in monitoring if their return on investment is fair enough to compensate for the costs.

There are mixed results in the literature regarding the role of institutional investors in monitoring earnings management. Charitou et al. (2007) focused on aggregate institutional investors and examined US-based distressed firms. They looked into two things: (1) whether managers were motivated to control earnings or not, and (2) how institutional ownership affected this discretion. The findings indicated that managers had incentives to lower their pay before declaring bankruptcy. In addition, the study discovered a substantial positive association between institutional ownership and discretionary accruals, which occurred two years prior to bankruptcy. It suggests that institutional investors' ownership, in case of distressed firms, helps prevent managers from engaging in under-reporting of earnings before filing bankruptcy.

Additionally, the literature also shows that the extent of monitoring differs for different investors, based on the level of incentives (short-term or long-term horizon) for each institutional investor. For instance, Tsouknidis's study from 2019 looked into how institutional investors' ownership may affect how much managers could utilise earnings management. The manager's choice to reduce research and development (R&D) costs and use those savings to increase short-term profitability was the subject of the study. Due to institutional investors' sophistication and expectation of careful monitoring, the findings showed that companies with significant institutional ownership did not frequently slash R&D expenditures. The study reported that managers' incentives to cut expenses increased when institutional investors largely owned those firms with short-term investment objectives (high portfolio turnover and using momentum trading methods).

The effect of institutional ownership on aggressive earnings management was studied by Maswadeh, (2018) and found that institutional ownership is associated with income-increasing discretionary accruals. At a low level of institutional ownership, the association is positive and tends to be negative at high levels. The positive relationship suggests that these investors motivate managers to misuse earnings management at low levels of institutional ownership. In contrast, the negative association implies that long-term institutional investors provide better monitoring to managers at high levels.

Koh (2007) focused his research on US-listed firms and classified them into two groups. Group 1 included firms with incentives and the ability to use earnings management, and group 2 included those firms that did not have this opportunity. Evidence found indicated that long-term institutional investors limited the use of discretionary accruals for group 1 only. Further, the study also indicated that banks and insurance companies (i.e. pressure-sensitive investors) positively associate with discretionary accruals, again only for group 1. The investors included in group 1 use discretionary accruals to avoid reporting loss or decline in earnings.

Afterwards, another study conducted by Lemma et al., (2011) concluded that the largest institutional investors exercise a negative impact on discretionary accruals. The researchers suggested that the largest institutional investors are motivated by a considerable proportion of their shareholding. As a result, they provide efficient monitoring and helps to constrain earnings management. Hence, the current study proposes the hypothesis based on the alignment effect, which predicts that the higher the institutional ownership, the lower the use of earnings managements.

**H2**: Institutional ownership has a negative impact on earnings management.

**Managerial Ownership and Earnings management**

Based onthe earlier discussion, it is found that managerial ownership can either enable the managers to get their interests aligned or diverge from other shareholders' interests. Thus, managerial ownership could also be seen to impact the motivation level of managers and influence them for avoiding or engaging in earnings management activities.

The pattern of ownership structure is classified into two classes, i.e. dispersed and concentrated ownership. In this regard, literature presents mixed evidence. Past studies have focused on developed countries (e.g. US), where firms with diffused ownership structures are found. For instance, the study of Gonzalez & Garcia-Meca, (2014) inspected the linkage between managerial ownership variables and the choices managers make regarding earnings management. The results showed a negative relationship between the variables under study. The study also reported that firms with low managerial ownership (less than 5%) exercise twice of absolute discretionary accruals than firms having high levels of managerial ownership (more than or equals to 35%). The results revealed evidence for the existence of a non-linear association between the stated variables, respectively. It was suggested that managers with lower ownership have more incentives to use opportunistic earnings management to mitigate restrictions in accounting-based provisions and other reasons.

Kouki (2014) found in their study that the managers of firms in the United States oil and gas sector were found to be engaged in earnings management practices to show increased earnings and consequently gain higher bonuses. Another study conducted by Sakaki, Jackson, & Jory (2017), later concluded that the managers tend to sell their shares after the earnings are announced in the case of high equity incentives. These managers also report the earnings to gain capital gains by meeting or beating analyst forecasts through selling their stocks at higher prices. Such results

indicate that whenever there is a conflict of interest between managers and firms, managerial ownership causes managers to engage in earnings management.

According to Gabrielsen et al.'s study from 2002, there is a small but favourable correlation between management ownership and absolute discretionary accruals. Their analysis was centred on publicly traded Danish companies in regulated industries (such the transportation and utility sectors). The findings were in contradiction to Warfield et al. (1995), and it was proposed that the disparate results were caused by the high ownership concentration and relatively small size of enterprises in Denmark in comparison to the US.

Yang et al., (2008) studied board ownership and its association with discretionary accruals in listed firms in Taiwan. Their results are overall found to be consistent with the findings of Gabrielsen et al., (2002) and Cheng and Warfield (2005). After further classifying director ownership into executive and non-executive groups, the study found a non-linear association between executive-level director ownership and discretionary accruals, having an inverted "u-shape". It shows that high ownership levels may have caused the executive directors to tie their interests with the interests of other shareholders. A positive relationship was reported for the non-executive directors, indicating that equity incentives may have motivated the directors to use earnings management to increase their stocks' prices and make them profitable for future selling (Aygun,Ic, & Sayim, 2014). In a nutshell, the evidence from the existing literature is still mixed and limited about the influence of managerial ownership on earnings management.

**H3:** Managerial ownership has impact on earnings management.

## Methodology

The data sample is from FTSE-350 and Pakistan Stock Exchange (PSX) listed firms. Nine years data (from 2011 to 2019) is take nunder consideration to test the hypothesis. Companies from non-financial sectors listed in both stock exchanges are used to test the hypothesis. 233 companies are the part of analysis from FTSE-350 and 167 are from Pakistan Stock Exchange. The following research models are taken into account to pinpoint the influence of ownership structure (Cown, Iown & Mown) on real earnings management (REM) and to compare the influence of ownership structure of big size and small size (Sdm) companies on real earnings management (REM) (Equation No.2).

$$REM_{it} = \beta_0 + \beta_1 Cown_{it} + \beta_2 Iown_{it} + \beta_3 Mown_{it} + \beta_4 Sdm_{it} + \beta_5 Sdm_{it} * Cown_{it} + \beta_6 Sdm_{it} * Iown_{it} + \beta_7 Sdm_{it} * Mown_{it} + \beta_8 Gth_{cit} + \beta_9 Lev_{it} + \epsilon_{it} \quad \textbf{Eq-1}$$

Real earnings management (REM) is measured by following the Roychowdhury (2006) model of overproduction, which capture the manipulation in reducing cost of goods sold. The model is as follows:

$$\text{Pro}_{it} = \beta_0 + \beta_1 \frac{1}{\text{TA}_{i,t-1}} + \beta_2 \frac{\text{Sale}_{it}}{\text{TA}_{i,t-1}} + \beta_3 \frac{\Delta\text{Sale}_{it}}{\text{TA}_{i,t-1}} + \beta_3 \frac{\Delta\text{Sale}_{i,t-1}}{\text{TA}_{i,t-1}} + \epsilon_{it} \quad \textbf{Eq-2}$$

Production cost (Pro) for firm (i) at year (t) is the sum of cost of goods sold and change in inventories and scaled by total assets at year (t-1), TA is the total assets, ΔSale is for change in sale for firm (i) at year (t). By following Zang (2012), the absolute residual value of the above model indicates the earning management and higher values represents the more cutting in cost of goods sold, which ultimate represents in increasing the real earning management.

Cown is representing the concentrated ownership in the firm, Iown is for institutional ownership and Mown represents the managerial ownership. Size is for firm size and measured by natural log of total assets, Gth is sale growth and Lev is used for leverage measured by debt to equity. Sdm is dummy variable, which represents the small and big firms, if size (Total assets) of a firm (i) at time period (t) is equal or above the average size (Average total assets) then 1 (big size) and 0 (Small size) otherwise. The generalized methods of moments (GMM) are applied in both scenario (Pakistan and UK) to test the hypothesis and GMM addresses the issue of endogenity (Busch & Lewandowski, 2018; Aksar & Ahmed, 2022).

## Results

The results are obtained and to describe the data descriptive statistics and correlation analysis for all variables in the context of both countries are presented in table No.1 and table No.2 respectively.

In table No.1, the results are depicting that averagely real earning management (REM) for PSX listed companies is 1.1298, which means averagely difference between actual production cost scaled by total assets and estimated cost measured by using equation No.2 is showing that averagely overproducing is there to cut down the cost of goods sold, but variation in this average value is measured by standard deviation with value 0.8186. The results are also indicating the average percentage of ownership structure (Concentrated ownership, Institutional Ownership and Managerial ownership) along with the average variation in ownership structure from firm to firm and time to time. Average, growth rate, firm size and usage of debt and equity in PSX listed firms with dispersion is also mentioned. Moreover, the table is indicating the relationships between the variables. The co-efficiennt of correlations are demonstrating that relationships between explanatory variables are weak, which demonstrates that multi-co-linearity is not a significant problem.

In table No.2, the results about the average value of real earnings management (REM) for UK based companies is 0.4710, which shows that the overproducing is there in firms to cut down the cost of goods sold, but variation is also there i.e. 0.5721. The results are also indicating the average percentage of ownership structure (Concentrated ownership, Institutional Ownership and Managerial ownership) along with the average variation in ownership structure. Furthermore, the correlation analysis is depicting the weak relationships between the explanatory variables, which demonstrates that multi-co-linearity is not a significant problem.

*Table No.1 Descriptive statistics and Correlation Analysis in Pakistan Scenario*

| | Descriptive Statistics | | Correlation Analysis | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Variables** | **Mean** | **S.D** | **REM** | **CONCOWN** | **INSTOWN** | **MANGOWN** | **GROWTH** | **LEVERAGE** | **SIZE** |
| **REM** | 1.1298 | 0.8186 | 1.000 | | | | | | |
| **COWN** | 7.5056 | 1.1546 | -0.265 | 1.000 | | | | | |
| **IOWN** | 0.1387 | 0.3674 | -0.003 | 0.077 | 1.000 | | | | |
| **MOWN** | 0.2551 | 0.4230 | 0.009 | -0.1859 | 0.703 | 1.000 | | | |
| **GTH** | 15.1145 | 1.6642 | 0.258 | 0.3429 | 0.083 | -0.062 | 1.000 | | |
| **LEV** | 0.6413 | 0.5598 | -0.055 | -0.0137 | -0.034 | 0.008 | -0.226 | 1.000 | |
| **SIZE** | 15.2697 | 1.4871 | -0.219 | 0.5639 | 0.081 | -0.102 | 0.802 | -0.224 | 1.000 |

REM=Real earning management, COWN=Concentrated ownership, IOWN=Institutional Ownership, MOWN=Managerial Ownership, GTH=Sale Growth, Lev=Leverage, Size=Firm Size

*Table No.2 Descriptive statistics and Correlation Analysis in UK Scenario*

| | Descriptive Statistics | | Correlation Analysis | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Variables** | **Mean** | **S.D** | **REM** | **CONCOWN** | **INSTOWN** | **MANGOWN** | **GROWTH** | **LEVERAGE** | **SIZE** |
| **REM** | 0.4710 | 0.5721 | 1.0000 | | | | | | |
| **COWN** | 0.4011 | 0.0986 | -0.0127 | 1.0000 | | | | | |
| **IOWN** | 16.7149 | 36.6704 | -0.0186 | 0.0403 | 1.0000 | | | | |
| **MOWN** | 5.2140 | 14.5630 | 0.1110 | 0.0070 | -0.0838 | 1.0000 | | | |
| **GTH** | 13.7227 | 2.5370 | 0.3632 | -0.0223 | 0.0199 | -0.1064 | 1.0000 | | |
| **LEV** | 0.1753 | 0.1681 | -0.0347 | 0.0251 | 0.0031 | -0.1074 | 0.1706 | 1.0000 | |
| **SIZE** | 14.8250 | 1.7919 | -0.1716 | 0.0124 | 0.0393 | -0.2171 | 0.6250 | 0.1273 | 1.0000 |

REM=Real Earning Management, COWN=Concentrated Ownership, IOWN=Institutional Ownership, MOWN=Managerial Ownership, GTH=Sales Growth, Lev=Leverage, Size=Firm Size

*Table No. 2 Effect of Small and Big firm's Ownership Structure on Earning Management*

| Methods | Generalized Method of Moments | | | Generalized Method of Moments | | |
|---|---|---|---|---|---|---|
| | Pakistan Scenario | | | UK Scenario | | |
| Variables | Coefficient | t-Statistic | Prob. | Coefficient | t-Statistic | Prob. |
| C | 19.9445 | 3.8587 | 0.0001 | -3.1148 | -1.0405 | 0.2982 |
| COWN | -2.9686 | -3.5534 | 0.0004 | -0.8753 | -3.4672 | 0.0005 |
| IOWN | 1.1557 | 3.6096 | 0.0003 | -0.0016 | -2.3785 | 0.0175 |
| MOWN | -1.5903 | -4.4026 | 0.0000 | 0.0007 | 0.3026 | 0.7622 |
| SDM | -39.8931 | -3.6462 | 0.0003 | -1.1791 | -2.9098 | 0.0037 |
| SDM*COWN | 5.4219 | 3.6179 | 0.0003 | 1.8280 | 3.2065 | 0.0014 |
| SDM*IOWN | -1.8388 | -3.6119 | 0.0003 | 0.0016 | 2.5921 | 0.0096 |
| SDM*MOWN | 2.3469 | 3.7251 | 0.0002 | 0.0051 | 0.9073 | 0.3644 |
| GTH | 0.1497 | 2.0380 | 0.0418 | 0.3114 | 1.4199 | 0.1558 |
| LEV | -0.5004 | -2.5736 | 0.0102 | -0.7517 | -1.8904 | 0.0589 |
| **R-Square** | **0.6964** | | | **0.6724** | | |
| **Adjusted-R-Square** | **0.6318** | | | **0.6093** | | |
| **J-Stat** | **0.0059** | | | **3.9762** | | |
| **Prob J-Stat** | **0.9389** | | | **0.0701** | | |

REM=Real earning management, COWN=Concentrated ownership, IOWN=Institutional Ownership, MOWN=Managerial Ownership, GTH=Sale Growth, Lev=Leverage, Size=Firm Size

In table No.3, the results obtained by applying the generalized methods of moments (GMM) on equation No. 1 and by using the panel data of companies of both stock exchanges (FTSE-350 & PSX) listed companies. The probability of J-statistic in both cases is greater than 0.05, which means after applying GMM, the problem of endogeneity is removed. The values of R-squares in the Pakistan and UK scenario are 0.6964 and 0.6724 respectively, which shows that the explanatory power of the models is 69.64% in the case of Pakistan and 67.24% in the case of the UK. In case of Pakistan, the ownership structure affects the real earning management (REM) significantly. However, concentrated ownership and managerial ownership have a negative influence, but the positive influence of institutional ownership on real earning management is seen. The resuts are in accordance with the alignment effect which postulates that increase in managerial ownership reduces the agency conflict thereby reducing the motivation of managers to indulge in REM. The co-efficient of SDM is negative with a p-value less than 0.05, which shows that big and small size firms have significantly different real earning management. Moreover, it shows that small-size firms have more real earning management than big-size firms. The smaller firms have less opportunities to manage the earnings using accruals therefore the REM practices are high. The coefficients of slope dummies (SDM*COWN & SDM*MOWN) are positive and significant, which are explaining that in the case of big size firms the concentrated and managerial ownership has more influence on real earning management rather than the small size firm, but the co-efficient

of slope dummy (SDM*IOWN) is negative and significant, which shows the less influence of institutional ownership on real earning management in case of big size companies. Both control variables have a significant impact on real earning management.

Concerning UK scenario, the results are depicting that only concentrated ownership and institutional ownership decrease the real earnings management (REM) as the co-efficient of both ownerships are negative and significant. The presence of vigilant institutional investors restricts the opportunistic behaviour of managers. However, managerial ownership (MOWN) is not contributing to reducing the real earning management (REM). Big size firms have less influence on real earnings management (REM) as compared to small size firms as the co-efficient of SDM is negative and significant. The results suggest that big firms have more opportunities to use accrual earnings management as compared to small firms. The coefficients of slope dummies (SDM*COWN & SDM*IOWN) are positive and significant, which indicates big size firms have more influence on real earning management rather than small size firms. However, the influence of managerial ownership of both big and small size firms is not significantly different.

## Conclusion

The study analyzes the influence of ownership structure on real earnings management among big and small size firms'. The study uses the generalized method of moments to test the hypothesis by using the panel data of listed firms on PSX and FTSE-350. The resuts indicate that ownership structure influences the real earning management. However, results are mixed in both scenarios (PSX and FTSE-350). Moreover, big and small sized firms are involved in significantly different real earnings management. In case of Pakistan, all dimensions of the ownership structure of big firms have significantly different influence on real earning management as compared to small firms, but in case of UK only managerial ownership do not do so. The results of the study are beneficial and helpful for the policymakers to reduce the real earnings management as accrual earnings management can be controlled by vigilant auditors but the REM can be done by the managers through change in discretionary expenses.

Following are the limitations of this research i.e., only one country each from emerging and developed economy is taken as part of the study. Moreover, only one dimension of earnings management is used i.e. real earnings management. In future studies, other aspects of earnings management i.e. accrual earning management and aggregation of both real and accrual earnings management (Huang & Sun, 2017) may also be used. Moreover, the real earning management may be measured by discretionary expenses (Roychowdhury, 2006). The earning management can also be used as a mediator in the relationship between ownership structure and firm performance.

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