

# Impact of Ownership Structure and Corporate Governance on Earning Management: Empirical Findings from Listed Firms on the Pakistan Stock Exchange

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#### Abstract

**Purpose-** This study investigates the interplay among Ownership Structure, Corporate Governance, and Earnings Management by employing ordinary least square (OLS) regression. To find the relationship among the three constructs based on data sourced from listed companies on the Pakistan Stock Exchange spanning 2016-2021 were used, excluding the financial industry due to its unique reporting system.

**Design/Methodology-** The sample comprises 111 firms chosen based on data availability. To measure earnings management, the researchers used a modified version of John's model (1995) to estimate discretionary accruals.

Findings- The study's key findings include the significant role of institutional investors in reducing earnings management. The number of board directors and ownership concentration were observed to impact discretionary accruals. Control variables indicated that more profitable, growing, and highly leveraged firms tend to engage in earnings management, which decreases with the firm's age. The study revealed a diverse relationship between ownership structure, corporate governance codes, and earnings management. Notably, significant institutional investment reduces ownership concentration, leading to decreased earnings management. Moreover, the results show a positive and significant correlation between firm size and Return on Assets (ROA).

**Practical Implications-** Board independence was found to have a positive impact on earnings management, suggesting that boards serve a more complex role than mere monitoring to mitigate accounting manipulation.

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#### Introduction

Due to the evolution of modern business practices, many corporations today are family-owned and under the control of significant block holders. This dynamic gives rise to the agency problem, which extends beyond the relationship between majority shareholders and managers, encompassing conflicts between management and minority shareholders as well. As agency conflicts intensify, issues of trust become prominent and hold a pivotal role in financial analysis. Given that the management team bears responsibility towards shareholders, it's important to note that an organization involves various stakeholders with their distinct interests. Consequently, stakeholders possessing authority often attempt to manipulate outcomes within their jurisdiction to align with their personal preferences. An illustrative instance of such manipulation is earnings management, a tactic employed by accountants to create smoother earnings trajectories (Ashiq et al 2022).

According to Nuryana et al (2019), concept of appropriate corporate governance is emerged as a result of assessment of a need. Corporate Governance code in March 02 is given by Securities and Exchange Commission of Pakistan (SECP) as a result of this continuation. Definition of corporate governance given by Gabrielle O'Donovan is a system having people, measures, and procedures that fulfill the requirements of all partners and players by giving directions and managing their performances with best business experience, wisdom, and hard work.

The procedure in which partners and players sheltered themselves from internal threats is known as Corporate Governance (Uwuigbe et al., 2014). Different valuable rules and regulations fall under these procedures. Issues among managers and financial providers might be limited or lessen to an extent because of this governance and as a result effective contracts and business expands. Well established corporate governance relied on outer legislative and hardworking market along with stronger culture board which is responsible for the safety of measures and goals of governance. Purpose of corporate governance is to provide facility of continuous interest to all customers and players (Mellado and Saona 2020).

This agency creates issue of excessive legal expenses for all customers and players in corporation in economically established countries. Entire observing expenditures like assembly voting's, legal measures against organizers, fault working by customers and all players, other expenses like revelation of investigations and other capacities of organizers, is the description of agency cost given by (Jensen and Meckling 1976). Corporation therefore provides benefits to the partners by decreasing expenses. Different beneficiary procedures should be adopted like lay out of panel, self-standing organizers, scrutiny etc., so that all players and customers should be safeguard (Man and Wong 2013).

Chen et al (2021) depicted not only is the conclusion making by selected illustrative responsibility of corporate governance. The liability of firm is also judged. The corrective measure is through budgetary broadcast. Different controversies like payment proprietors in budgetary compositions are there to be debate. Payment proprietors are controversial area but corporate governance has gained the dominance.

Corporate Governance is controversial area in Pakistan and other underdeveloped countries. Biggest issue is the family owned corporations and firms. Controversies always exist among significant customers and players of the firm and family controllers. In order to get maximum benefit from the customers and all players, a firm should be detached from family controllers. In this way family owners can be controlled by all players (Yasser & Mamun, 2016). In Pakistan implementation of such rules is not easy.

Palacios et al (2021), studied that if corporation is administrated by proprietors, there is better performance of managerial functions and it also results in elimination of any disagreements thus resulting in increased worth of corporation but when the case is against then there will be decrease in worth of corporation because

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administration will perform their duties according to their own wishes. The managerial functions will be more competent and effective when corporation is in the hands of owners of public shares because of their huge shares extent. The examination and evaluation of standard of valid budgetary description and hard work by extrinsic scrutiny members is the responsibility of scrutiny committees. Different areas of interest of scrutiny committee include; prevention of any fraudulence through valid measures, working of corporation under relevant rules and legislations, and to handle any relevant dispute (Arnas et al 2021).

In view of different instances of manipulation, financial statement has feature the inquiry on the adequacy of usage of good corporate governance in an organization for decreasing earning management. Observing instrument is the best approach to lessen the conflicts among financial specialists and the executives so as to adjust the enthusiasm among the stakeholders and managers. Agency theory contends that observing through great corporate governance is an ideal approach to limit earning management (Dalimunthe et al., 2016; Sari et al., 2016; Muda et al., 2016).

Earning management idea offers inspiration to record accumulations so as to mirror the impact of hidden financial events on the firm performance. Optional accruals are recorded by the board with the goal that they pass on private data about capacity of the organization to make future benefits. In addition optional accruals are otherwise called abnormal accruals is utilized as an intermediary for astute acquiring the executives in some earlier literature but managers may likewise have different inspirations for recording optional accruals to give the positive perspective on organization performance (Muda et al.,2018). The main objectives of study are: to examine the impact of ownership structure on earning management, to examine the impact of corporate governance on earning management.

#### Literature Review

Earning management is the process in which corporate managers having an aim to mislead the stockholders just to present a fair picture of the firm financial performance. As the stockholders have concern about the true picture of the company (Sulistyanto, 2015). There are two different ways of understanding of earning management. First, is the Opportunistic Earning Management in which the managers having concern with maximization of its value in the favor of their own remuneration treaties, debt agreements and government overheads. Second, is about Efficient Earning Management in which the earning management provides elasticity to the managers towards protection of their and the company's interest in anticipation of surprising events which could be beneficial for the concern parties involved in it.

As indicated by Kausalty et al. (2013), it was uncovered that corporate administration concerns to the structure, standards and techniques by which an organization is governed. Corporate governance provides guidance and it is most competent way to control and give way to the organization to satisfy the objectives and goals that might hold the organization regard and functional to all stakeholders in the long run (Muda et al., 2017). In this situation stakeholders include all those such as the board of directors, management, shareholders, employees & the general public. The structure of Good corporate governance includes several variable indicators. In this research, the indicator used by researchers is the Audit Committee.

Zhang et al. (2017) examined the effect of large shareholders governance ability on monitoring outcomes by using data of 42 countries spanning 1990 to 2008 of a company's having large number of block-holders. The findings suggest that the caliber of major shareholders is influenced by factors primarily associated with the efficiency of oversight, such as the cost of monitoring and the monitoring setting. The research also observed that these effects are more pronounced when block holders are less engaged in manipulating earnings compared to their objectives. This is particularly evident when the block holders' level of proximity and operational

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alignment with their objectives is similar, and when the target companies operate within weaker institutional frameworks for investor protection.

According to the signaling theory, outcome of a company indicates the financial position and value addition during a specific period to the investors in a capital market. In effect to this management of a company is always interested in the earning and its presentation in financial reports. Significant rationale for understanding financial reporting is an agency theory (Rasheed et al, 2019). According to this school of thought managers fully exploit information asymmetries and make only those decisions those will enhance their strength.

To affect earnings deliberately managers are involved in earning management by using various accounting procedures or by taking other actions such as voluntary income estimations or valuation of accruals. One of the most significant research area is earning management, as it effects reliability of financial reports which is a key source of confirmation for venture capitalist in a well-developed capital market. Accrual management and control of monetary exercises are the two basic types of earning management that are mostly highlighted by various studies. Organizations utilize different arrangements for creditors. Azhar et al. (2019) worth of stock, value and time of rarely utilize particulars for discretionary accruals. Real variables are also used for earning management to impact the long term interest but it is very costly. Graham, Harvey, and Rajgopal (2015) in their study observed that large number of respondent adopt real variables for earning management. However, Iqbal et al, (2013) argued that determination of the strategies used by managers to manipulate earnings is very expensive. She suggests that even more highlighted earnings management techniques, like change in accounting policies and timing of capitalization, are hard to interpret. She contended that observable tactics for earning management such as accounting procedures and capitalization timing is also very difficult to understand. Corporate governance provides track and it is an effective process to administer and control companies' activities to fulfill the goals and objectives that are in the best interest of all the stakeholders in the long run (Muda et al., 2017). All the parties involved in organization such as board of directors, management, shareholders, employees & the public constitute as stakeholder. The mechanism of Good corporate governance consists of several variable indicators. In this research, the indicator used by researchers is the Audit Committee.

The investigation utilized the two–Stage least squares (2SLS) estimation technique to deal with the immediate effect of family involvement on earning management as it relates straightforwardly or in a indirectly way with corporate governance for some selected PSX 100 firms depending on information sourced from 2016 to 2021. The study observed that family firm takes part in less accrual based earning management and that they will in general have higher corporate administration execution valuable for keeping up authenticity and protect socioenthusiastic riches. The investigation additionally seen that no critical relationship exist between corporate administration components and both of collection based or genuine profit the board conduct for the considered PSX 100 firms subsequent to representing the impact of family inclusion (Uwuigbe et al., 2014; Outa et al. 2017; Rasheed et al., 2019).

In view of different instances of control, financial explanations have feature the inquiry on the viability of execution of good corporate administration in an organization for lessening acquiring the executives. Checking instrument is the best approach to lessen the office clashes among financial specialists and the board so as to balance the enthusiasm between the executives and partners. Organization hypothesis battles that observing through great corporate administration is the best approach to limit winning administration. Corporate administration improves the executive's execution by administering and checking the board execution and furthermore guarantees the executives responsibility based on administrative structure (Muda et al., 2016; Sari et al., 2016).

Gaining the board idea offers inspiration to record accruals to mirror the impact of basic financial occasions on the firm execution. Discretionary accruals are recorded by the executives with the goal that they pass on

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private data about capacity of the organization to make future benefits. Additionally discretionary accruals are also referred to as abnormal accruals is utilized as an intermediary for shrewd acquiring the executives in some earlier writing, however chiefs may also have different thought processes in recording discretionary accruals to give the positive perspective on organization execution (Muda et al.,2018).

In view of different instances of control, financial articulations have feature the inquiry on the viability of execution of good corporate administration in an organization for diminishing acquiring the board. Observing component is the best approach to lessen the organization clashes among speculators and the executives so as to balance the enthusiasm between the board and partners. Office hypothesis battles that checking through great corporate administration is the best approach to limit acquiring the executives. Corporate administration upgrade the board execution by overseeing and checking the executives execution and furthermore guarantees the executives responsibility based on administrative structure (Muda et al., 2016; Sari et al., 2016; Dalimunthe et al., 2016).

Earning management is the idea offers inspiration to record accruals to mirror the impact of fundamental monetary occasions on the firm execution. Discretionary accruals are recorded by the executives with the goal that they pass on private data about capacity of the organization to make future benefits. Besides discretionary accruals are also referred to as abnormal accruals is utilized as an intermediary for entrepreneurial gaining the executives in some earlier writing, however directors may also have different intentions in recording discretionary accruals to give the positive perspective on organization execution (Ilyas et al.,2018).

Earning management is the process in which corporate managers having an aim to mislead the stockholders in order to present a true picture of the firm financial performance. As the stockholders have concern about the true picture of the company (Muda et al., 2017). Notwithstanding board, review council is required in the execution of good corporate administration standards, perform managerial and warning capacities and furthermore oversee appropriate assignments identified with the budget summary arrangement of the organization.

# **Earning Management**

According to the signaling theory, outcome of a company indicates the financial position and value addition during a specific period to the investors in a capital market. In effect to this management of a company is always interested in the earning and its presentation in the financial reports. Adamczyk and Franek (2022) contended that significant rationale for understanding financial reporting is an agency theory. According to this school of thought managers fully exploit information asymmetries and make only those decisions that will enhance their strength.

"Management employs earning management by using various methods to fulfill various purposes. Potharla and Dissanayake (2022) argue that there are four basic purposes behind the manipulation of a firm's earnings: external contracts, management compensational contracts, regulatory motivations, and capital market motivations. Ilyas et al (2018) studied that total income are an aggregation of operating cash flows and accruals; therefore, various accounting manipulations such as discretionary accruals or actions can be undertaken that can affect operating cash flows to manage reported earnings."

# Corporate Governance and Earning Management

A robust corporate governance (CG) framework enhances firm performance by preventing the undue influence of majority shareholders and ensuring that management decisions are made in the best interest of investors. Earnings management is one avenue through which this influence is mitigated, as it aims to smooth income fluctuations. This study aims to investigate whether a strong corporate governance framework influences earnings management.

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Earnings management is a strategy employed by the company's management team to intentionally manipulate the company's earnings to align with the projected targets. This strategy is employed to smooth profits. Thus, regardless of positive or negative earnings, companies, through earnings management, maintain accounting numbers consistently by either accumulating or removing funds from reserve accounts (Potharla & Dissanayake 2022). Muktadir et al (2019) argue that earnings management involves the use of managerial discretion in the application of accounting methods or the manipulation of transactions through accounting practices that impact the distribution of wealth among the firm, investors, managers, and society. Adamczyk and Franek (2022) define earnings management as the managerial act of increasing or decreasing the current accounting income of a firm without altering long-term profits. In conclusion, this research aims to explore the relationship between good corporate governance practices and earnings management."

# Ownership Structure and Earning Management

Earnings management is the process in which corporate managers aim to mislead stockholders to present a true picture of the firm's financial performance (Zhang, 2017). As stockholders are concerned about the accurate portrayal of the company (Zhang, 2017), corporate governance provides a track and is an effective process to administer and control companies' activities to fulfill goals and objectives in the best interest of all stakeholders in the long run (Kausalty et al., 2013; Muda et al., 2017). All parties involved in the organization, such as the board of directors, management, shareholders, employees, and the public, constitute stakeholders. The mechanism of good corporate governance consists of several variable indicators. In this research, the indicator used by researchers is the Audit Committee.

# **Board Independence**

The vigilant oversight by dedicated financial experts can curb the flexible behaviors of managers and reduce the likelihood of record manipulation. In contrast, shareholders with short-term investments are less vigilant in monitoring managerial decisions as they are primarily concerned with their immediate profits. Karina R (2021) argued that short-term investment holders may allow managers to make value-diminishing choices at the expense of shareholder interests. Furthermore, studies have reported that the frequent trading of short-term financials based on income news creates opportunities for managers to manipulate profits (Zhang, 2017). Therefore, we anticipate that short-term investors may increase the probability of fraud and misrepresentation."

#### **Audit Committees**

Ilyas et al.,2018 concentrated on autonomous chiefs in discouraging procuring the executives. The researchers investigated that the governing body, as a specialist of investors, is enabled to screen, control, and reward chiefs and affirm the board decisions, and this will demoralize gaining the board. However, studies have shown that board structure in terms of composition, size, meeting frequency, board independence, among other factors, also influences the relationship between board behavior and procuring the executives practices.

#### **Institutional Shareholders**

Paul et al (2023) reported that several firms, currently under intense legal investigations due to corporate financial scandals, resorted to extreme levels of earnings management to alter their financial results. Earnings management, as elucidated by Dalimunthe et al (2016) involves the efforts made by managers to manipulate actual earnings. This manipulation is achieved through the use of various accounting techniques, such as identifying non-regular items in financial statements. Managers achieve this by manipulating expenses to appear higher or different from the actual figures. Similar manipulation is applied to revenue transactions and entries, along with other techniques that impact current earnings (short-term earnings).

## Hypothesis of the Study

**H1:** There is significant connection amid corporate governance mechanisms as define by insider ownership (INSOWN) and EM practices

**H2:** There is significant connection amid Family ownership (FAMOWN) concentration and EM.

H3: There is significant connection amid Institutional Ownership (INSTOWN) and EM

H4: There is significant connection amid government ownership (GOVTOWN) and EM

**H5:** There is significant connection amid Board of Directors (BOD) independence and EM

**H6:** There is significant connection amid audit independence (AI) and EM

H7: There is significant connection amid firm size (FS) and EM

#### Variables Measurement

This work covers dependent variables, independent variables and control variable. Earning management is the dependent variable, CG and ownership structure are the independent variables, while control variables are the firm's characteristics such as firm age, firm size, return on assets and sales growth. The earning management is determined through optional accruals which will be utilized as an intermediary by utilizing Modified Jones Model to determine the extent of earning management. The earnings management is calculated through discretionary accruals which will be used as a proxy by using the Modified Jones Model to determine the extent of earning management. Discretionary accruals are obtained by subtracting nondiscretionary accruals from total accruals.

#### **Data Collection**

To collect the data regarding information about the variables, this study used the secondary method. The panel data used to conduct the study was extracted from multiple sources such as the website of Stock Exchange, Website of State Bank of Pakistan, websites and annual published reports of respective firms. Data for firm-level governance variables including family ownership, institutional ownership and board independence was extracted from the annual reports. Accounting data used to calculate firm size, sales growth, Return on the asset was gathered from annual reports and State bank analysis.

#### Results

Table 1 - Variables of the Study

Variables	Symbols	Measurements
Earning Management	EM	We used discretional accrual as a proxy for earning management
Independent variable	Symbols	Explanation
Insider Ownership	INSOWN	Percentage of employees and managers ownership
Family Ownership	FAMOWN	Percentage of family ownership
Institutional Ownership	INSTOWN	Percentage of institutional ownership
Government Ownership	GOVTOWN	Percentage of government ownership
Board Independence	BI	No of independent directors in board
Audit Independence	AI	No of independent auditors in firm
Control variables	Symbols	Explanation
Sales Growth	SG	Total sales growth in a year
Firm size	FS	Natural log of total assets
ROA	ROA	Return on assets=net-income/total assets

Based on prior research, we utilize discretionary accruals as a substitute for earnings management. We apply a modified edition of the Jones (1995) model to calculate these discretionary accruals, as described in the following manner:

# **Earnings Management**

Accruals have been extensively employed in literature as a substitute for earnings management. These accruals can be assessed using two distinct methods, namely the Balance Sheet approach and the Cash Flow Statement approach. According to this methodology, the total accruals can be computed using the subsequent formula (Healey, 1985 & Jones, 1991).

$$TAt = \Delta CAt - \Delta Casht - \Delta CLt + \Delta DCLt - DEPt$$

Cash Flows Statement Approach accruals can also be calculated by using this approach which can be seen by using the following equation: TAt = N.It - CFOt

NDAt = 
$$\alpha 1 (1/(At-1)) + \alpha 2 ((\Delta REVt-\Delta RECt)/(At-1)) + \alpha 3 (PPEt/(At-1)) -----(1)$$

Where:  $\Delta REVt = is$  revenues in year t less revenue in year t-1

 $\Delta$ RECt= is net receivables in year t less net receivable in year t-1.

PPEt =is gross property plant and equipment at the end of year t

At-1 is total assets at the end of year t-1 and  $\alpha$ 1,  $\alpha$ 2,  $\alpha$ 3 are firm specific parameters

## **Model Specification**

This research analyzes how the CG (Corporate Governance) framework influences EM (Earnings Management), particularly concerning optional accruals. To achieve this objective, we conducted a regression analysis, where we examined the relationship between the absolute value of optional accruals and various variables such as ownership structure, BOD and others as shown under:

EMit = $\beta$ 0 +  $\beta$ 1 INSOWNit +  $\beta$ 2 FARMOWNit +  $\beta$ 3 INSTOWNit +  $\beta$ 4 GOVTOWNit +  $\beta$ 5 BINDit +  $\beta$ 6 AUDINDit +  $\beta$ 7 FSizeit +  $\beta$ 8 SGit +  $\beta$ 9 ROAit +  $\beta$ 1 Eit------(2)

# **Priors Expectation**

This study believe a negative association between F. Size and EM, GOVTown and EM., EM and each of BIND, FARMOWN, but a positive relationship between each of INSOWN and AUDIND, INSTown, and EM.

#### **Baseline Model**

Econometric panel regression is used to analyze panel data. A linear regression technique is use as baseline model in this study. There is much importance of using panel data techniques such as it provides a large number of data points, increase the degree of freedom, and less collinearity among independent variables also improves the competence of econometric estimates.

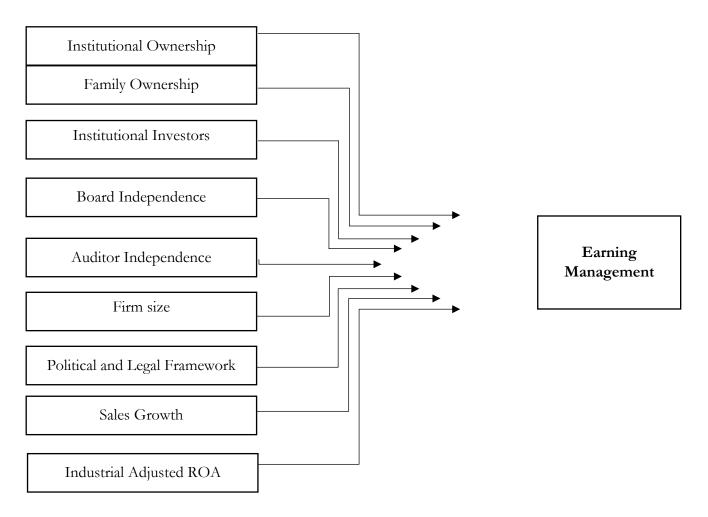


Figure 1- Conceptual Framework

Source: Lawal et.al, (2018)

# **Descriptive Statistics**

Descriptive statistics is about summarization and brief description of numerical data. Normally it gives average values of variables known as mean values along with other statistical information like standard deviation and range of the data. Descriptive statistics condense the data and provide a brief summary of large amount of data and it helps in understanding the overall trend of data. Descriptive statistics is a very important statistical tool used in mathematics and statistics and helps in financial and non-financial planning.

#### **Correlation Matrix**

Correlation matrix is used to measure the affiliation between variables of the study including both dependent and independent variables. In this study correlation measures the relationship between total disclosure level and corporate board characteristics and ownership attributes. Normally correlation is used to measure linear affiliation among variables and it also provides the direction of the variables relationship. That's why the values of correlation always fluctuate in between -1 and +1. The affiliation between variables could be positive and negative. If one variable increases the other also increases then the relationship is positive or direct. Similarly if there is decreasing trend in both variables then there is again positive or direct relationship between variables.

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On the other hand if there is increasing trend in one variable and decreasing in corresponding variable then there is negative or indirect affiliation. Normally in mathematics these two conditions are known as direct proportion and indirect proportion.

#### Panel Data

Panel data is the data which has the characteristics of both time series and cross-sectional data. This longitudinal information has "perceptions on similar units in a few distinctive timespans" (Lawal et al, 2018). A board informational index has numerous substances, every one of which has rehashed estimations at various timeframes. Board information may have individual or gathering impact, time impact, or both, which are investigated by fixed impact or potentially irregular impact models.

Because of the accessibility of panel data looks into are keen on board information demonstrating in light of the fact that longitudinal information have greater changeability and permit to investigate a larger number of issues than do cross-sectional or time-arrangement information alone. There is a lot of significance of utilizing panel data, for example, it gives increasingly instructive information, it gives an enormous number of information focuses, increment level of opportunity, more prominent inconstancy, less collinearity among free factors, and more proficiency. Given efficient panel data, panel data models are unquestionably alluring and engaging sine they give methods for managing heterogeneity and look at fixed as well as arbitrary impacts in the longitudinal information.

# Fixed versus Rotating Panel Data

The panel data set is a fixed panel when for each period the same individuals or units are observed. While observing different individuals or units from one period to another, the data set is assumed as a rotating panel. Panel data study time effects, group effects or both of them in order to deal with individual effect or heterogeneity that may or may not be detected. These effects may be called random or fixed effects.

#### **Fixed Effects Model**

Fixed effects model depicts the association among regressor and regressand within a firm and the regressor variables may or may not be influenced by the individual characteristics of the firms (Torres-Reyna, 2021). Moreover, the results of the fixed effect model are assumed to be applicable to the sample.

#### Random-Effects Model

In a random fixed impacts model, the variety over the firm is thought to be arbitrary and uncorrelated with the repressor factors. The firm heterogeneity is assumed to be independent of the repressor variables which is considered as the reasonable assumption of the Random effects model (Torre-Reyna, 2007).

# Hausman Test (Fixed Vs Random)

It is a widely used test in econometrics introduced by Hausman in 1978, this test is used to compare the two sets of estimations on the bases of endogeneity. To detect the appropriate technique for the analysis of panel data, the Hausman test provides selecting criteria. In Hausman test, data is first analyzed in random effect model and then Hausman test is applied if the probability value of Hausman test is exceeded then 5% than data supports the random effect model contrary if the probability value remains under 5% then it shows the presence of fixed effect regression model.

H0 - random effect is apposite and consistent.

H1 - the fixed effect is appropriate, efficient and consistent.

The fourth chapter of the study discusses the methods of data analysis and results achieved on the basis of statistical data analysis tools. Data analyzed on the basis of the methodology of the study as discussed in previous chapter of the study. Descriptive statistics is applied on large amount of data to get the main trends in the data. Descriptive statistics is a very important statistical tool used to obtain the main trends in the data normally about mean value, standard deviation and range of the data.

Table 2 - Descriptive statistics

Variables	Unit	Obs	Mean	Median	Min	Max
Discretional Accruals	(PKR)Million	555	0.6167	0.9025	-11.4831	0.9042
INSOWN	0/0	555	0.0227	0.0143	0.00001	0.1250
FAMOWN	0/0	555	53.0277	53.1906	3.0333	97.9900
INSTOWN	0/0	555	0.2034	0.1130	0.000035	1.5084
GOVTOWN	0/0	555	0.0732	0.0170	0.00003	1.8393
BI	Numbers	555	1.3966	1.0000	1.000	5.000
AI	Numbers	555	1.0937	1.0000	1.000	4.000
SG	%	555	1.4925	0.2732	-2.9201	15.5292
<b>Total Assets</b>	(PKR)Million	555	19867.63	36261.13	22.1955	307838.0
ROA	0/0	555	0.1396	0.0791	-10.9101	10.2507

The table presents the descriptive statistics for the variables utilized in the regression model. The data indicates that EM (Earnings Management) displays limited variation across different firms. This is evident from the small difference between the mean and median values of EM, suggesting a consistent reporting pattern among firms.

Moreover, the mean ownership structure reveals the following details. Family ownership averages at 53% in Pakistani firms, highlighting a concentrated ownership scenario. Institutional ownership averages around 20%, while insider ownership is at 0.02%. Board independence is reported at 1.4%, indicating compliance with the CG code of 2012. However, there are instances where some companies have a minimum board independence level of 1, while others boast 5 independent board members.

On average, audit independence stands at 1.04%, with a minimum value of 1 and a maximum of 4. Government ownership averages at 0.07%. The high levels of ownership structure, audit committee independence, and board composition underscore the stringent corporate governance standards upheld by listed Pakistani companies.

Pearson correlation is calculated among variables and results are reported in Table. It is the numerical measure, used to detect the strength of the association between two variables. Its value always ranges between -1 and +1. Correlation is a widely used statistical tool in research, to detect the relationship among the variables. Correlation is the measure of the degree to which any two variables vary together. Correlation is further categorized into two types, positive correlation, and negative correlation. If both the variables are decreases or increases together then it is the indication of positive correlation contrary if one variable increases (decreases) with respect to the decrease (increase) in another variable than it is the sign of negative correlation.

77 11 2	C 1	
Lable 3-	Correlation	matmx
	Correction	1100001000

Variables	DA	INSOW	FAMO	INSTO	GOVT	BI	AI	FS	SG	RO
		N	WN	WN	OWN					А
DA	1									
INSOWN	-	1								
	0.0447									
FAMOWN	0.0638	-0.291	1							
		***								
INSTOWN	0.0831	0.1941	-0.1671	1						
	*	***	***							
GOVTOWN	0.0344	0.0007	-0.0208	0.3052	1					
				***						
BI	0.0885	-0.0639	-0.0302	-0.0944	-0.0617	1				
	*			*						
AI	-	-0.0578	-0.0525	-0.0988	-0.0872	-0.082	1			
	0.0612			**		*				
FS	0.4274	0.0403	-0.0625	0.042	0.0336	0.2164	0.0196	1		
	***					***				
SG	-	0.1942	-0.1354	0.3049	0.2909	-0.2111	-0.1418	0.2669	1	
	0.0422	***	***	***	***	***	***	***		
ROA	0.1066	0.4128	-0.0866	-0.0004	-0.0856	-0.139	-0.002	-0.0101	0.0763	
	**	***	*			***				

This table reports the correlation coefficient on the variables defined in table.\*\*\* p<0.01, \*\* p<0.05, \* p<0.10 indicates significance level at 1%, 5% and 10% level respectively.

Table suggests a positive connection exists between earning management (EM) and various aspects of corporate governance. These findings imply that due to weak corporate governance systems, EM activities are more prevalent in Pakistani listed companies. The outcomes reveal that ownership structure, encompassing family ownership, insider ownership, and government ownership, demonstrates a positive and substantial correlation with EM. Conversely, institutional ownership is linked negatively to EM. Board independence also exhibits a significant and positive correlation with EM, while audit independence shows a negative association. Conversely, concerning firm-level variables, firm size is notably and positively associated with EM, while growth and Return on Assets (ROA) do not show significant correlations.

By considering all explanatory and control variables, we assessed the potential presence of multicollinearity through the correlation matrix. Gujarati (2003) indicates that multicollinearity could pose issues in regression analysis if correlations surpass the 80% to 90% threshold. Looking at the correlation matrix provided, it's evident that in this particular study, serious multicollinearity concerns do not arise for further analysis. This conclusion is drawn since the coefficient values for all variables remain below 0.80. The highest coefficient value observed is 0.41, which pertains to the correlation between ROA and institutional ownership.

Regression is used to identify the relationship between one dependent and one or more than one explanatory variables; it also provides the degree to which independent variables causes to bring changes independent either positively or negatively, significantly or insignificantly. Regression analysis is conducted by using two data sets. For each data set, one panel regression equations have been estimated. Firstly, non-Discretionary accruals are estimated by using Jones model 1995, then discretionary accrual are estimated by subtracting Non-Discretionary accruals from total accruals, and then final panel regression is estimated to find the impact of corporate

governance on earning management. The dependent variable (discretionary accruals) is regressed on all the independent and control variables. OLS is used to estimate the impact of corporate governance on earning management and the results are presented in table.

Table 4 – Panel Data Linear Regression Analysis

Variables	Coef.	Std. Err.	t	P>t
INSOWN	-0.01861	0.100321	-0.19	0.853
FAMOWN	0.002093	0.001015	2.06	0.04
INSTOWN	3.348893	1.481495	2.26	0.024
GOVTOWN	0.417705	0.261804	1.6	0.112
BI	0.077843	0.041088	1.89	0.059
AI	-0.1426	0.046619	-3.06	0.002
FS	-0.04937	0.014538	-3.4	0.001
SG	0.14797	0.040806	3.63	0.000
ROA	0.410407	0.180625	2.27	0.024
CONS	-0.9165	0.334832	-2.74	0.007
No of Obs.		555		
R2		0.1241		

In order to test the hypothesis of the study panel data, regression analysis has been applied. Panel data having the time series dimensions (5 years) and also cross-section dimension (111 firms) therefore we used the panel data econometrics technique to estimate the model.

We find that audit committee independence is negatively related to the use of discretionary accruals, allowing us to accept the hypothesis. The presence of outside members on the committee strengthens its effective oversight, thus reducing the likelihood of corporate failure and financial fraud. Our results are consistent with Latif and Abdullah (2015) they found significant negative association among audit committee and earning management in case of Pakistan. Dechow et al. (2012) also found a positive and significant association among family ownership and earning management. The results of their study indicate that family firms are more likely to engage in earnings management than are nonfamily firms in listed high-tech firms in Taiwan.

Moreover, empirical results show that the variable insider ownership i-e defined as managerial ownership is significant at the level of 5% models used to estimate discretionary accruals. Contrary to agency theory, this finding suggests that managerial ownership positively influences earnings management practice. Thus, as Firth et al (2016), Cornett et al (2013), and Xue and Hong (2016) noted that the lack of market discipline can lead to managerial practices that are aligned with personal motives. Findings are consistent with Okougbo et al. (2015) who find a direct relation between insider ownership and earning management and argued that insiders' ownership may restrict the rise of discretionary accrual only when a percentage of shares held by board /management is small. Results are also in line with the study of Al-Fayoumi et al (2013) they also found a positive relation between managerial ownership and earning management.

Result depicts negative association among earning management and institutional ownership. The result indicates that greater level of institutional ownership deter earning management. Institutional owners demand higher

level of scrutiny and disclosure of information so managers are unable to manipulate earnings. Large institutional investment diminutions ownership attention and remove block holding consequently it will decrease earning management. Aggarwal (2011) argues that ownership structure helps to ensure effective control of managers. Similarly, Sajjad et al. (2019) find a negative relationship between earnings management and the presence of institutional investors holding shares in the firm.

Growth is found to be significantly related to DA. As predicted, companies with high growth opportunities are less inclined to smooth their earnings, as any surprise earnings would have an adverse impact on the firms. These findings are consistent with those found by Klein (2002) and Xie et al. (2018) who reported that firm size is significantly related to earnings management and Bowen et al. (2013) who also found growth opportunities to be significant and negatively related to DA.

Table 5 – Hausman Test

Chi2	Probability	Model	Dependent	
1.57	0.751	Random Effect	Discretional	

For checking robustness of the results we applied different tests initially we use Hausman test for checking whether random or fixed effect model is applied on our data as shows in table the probability is grater then 5 we use random effect GLS regression analysis.

Table 6 - Random-Effect Regression Analysis

Variables	Coef.	Std. Err.	P>z	
INSOWN	3516.273	7142.046	0.622	
FOWM	-5.20923	14.50975	0.72	
INSTOWN	1048.29	6231.105	0.866	
GOVTOWN	-462.86	274.888	0.092	
BI	1146.487	745.9654	0.124	
AI	-138.925	180.7798	0.442	
FS	-457.928	-457.928 1992.646		
SG	-2707.53	1666.036	0.104	
ROA	1185.219	1888.165	0.53	
Const	15273.52	13598.4	0.261	
R2		0.11		
Number of obs		555		

On the basis of Hausman test we applied Random effects technique to predict the relation among variables. Results presented in Table depicts that all the independent variables are highly insignificant by this method. Only sales growth is found significant. R2 also drops which indicates that independent variables impact only 11%.

Table 7 - Sensitivity Analysis

Variables	Test I	Test II	Test III	TEST IV	TEST V	TEST VI	TEST VII
INSOWN	-0.0186**	0.1713	0.1893	0.4254		0.4026	0.4560
<b>FOWM</b>	0.0021**	-0.0006	-0.0006			-0.0006	-0.0006
<b>INSTOWN</b>	3.3489	0.0377				0.0766	0.0829
GOVTOWN	0.4177*					-0.0017	-0.0300
BI	0.0778***	0.0025	0.0020	0.0029	0.0034	-0.1564	
AI	-0.1426***	-0.0128	-0.0129	-0.0118	-0.0122		
FS	-0.0493***	-0.0067	-0.0065	-0.0063	-0.0057	-0.0035	-0.0040
SG	0.1479**	0.1030***	0.1034***	0.1036***	0.1038***	0.1124***	0.1109***
ROA	0.4104***	0.2542***	0.2548***	0.2545***	0.2542***	0.2633***	0.2625***
Constant	-0.9165	-0.2393	-0.2344	-0.2776	-0.2708	-0.3902	-0.3845

This table reports the coefficient on the variables defined in table. \*\*\* p<0.01, \*\* p<0.05, \* p<0.10 indicates significance level at 1%, 5% and 10% level respectively.

In order to find the credibility of random effects method we conduct sensitivity analysis. At first we dropped ownership variables and then governance variable but result remains same all the variables are insignificant in all cases. Therefore, we used OLS regression analysis to find the relationship among all the variables. We explained results on the basis of this method.

#### **Discussion and Conclusion**

The findings demonstrate a notable link between board independence and earnings management. Board independence exerts a favorable influence on earnings management. These outcomes indicate that the board doesn't function solely as a supervisory instrument aimed at curtailing the manipulation of accounting information.

Results indicate ownership structure family ownership has positive relationship with earnings management. The result indicates that greater level of institutional ownership deter earning management. Institutional owners demand higher level of scrutiny and disclosure of information so managers are unable to manipulate earnings. Institutions large investment diminution ownership concentration and remove block holding thus it decline earning management. Study result indicates positive and significant association among firm size and ROA.

This research primarily aims to investigate how ownership structure and corporate governance impact earnings management within a developing country context, such as Pakistan. The study seeks to extend the current knowledge about the quality of financial reporting by analyzing how these factors shape financial practices within companies. The outcomes of this research hold significant importance for investors in developing nations, as they heavily depend on financial statements to guide their investment choices. Furthermore, the study contributes to the comprehension of the relationship between corporate governance and financial reporting in economies like Pakistan.

The overall findings underscore the pivotal role of corporate governance in enhancing the integrity of financial reporting. Specifically, the study confirms our initial hypothesis (H1) by revealing that firms with concentrated ownership structures are more susceptible to engaging in earnings management. This discovery is particularly noteworthy in the context of developing countries like Pakistan, where ownership tends to be highly concentrated. Thus, it underscores the necessity for regulatory bodies to offer increased safeguards for minority shareholders.

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Furthermore, the research indicates that companies with boards comprised of more independent members are also inclined to employ earnings management tactics. This suggests that boards dominated by non-executive directors might not effectively curb managerial motivations, ultimately leading to lower reporting quality.

The empirical evidence presented in the study serves as a valuable guide for policymakers, highlighting the direct connection between corporate governance practices, firm-specific variables, and the quality of financial reporting. Consequently, companies are advised to reconsider their criteria for appointing directors, with an emphasis on fostering greater institutional ownership and reducing ownership concentration. The results also shed light on a positive correlation between insider ownership and earnings management. A closer alignment between owners and managers might lead managers to be less compelled by financial markets to disclose the firm's value and may lead to reduced attention to short-term financial reporting. However, it's important to note that insider ownership might only constrain the use of discretionary accruals when the percentage of shares held by the board/management is minimal.

The study also unveils a significant inverse relationship between the audit committee and earnings manipulation. The presence of external members on the committee enhances its oversight effectiveness, subsequently lowering the risk of corporate failure and financial misconduct.

To conclude, this research underscores the pivotal influence of corporate governance on the quality of financial reporting, particularly within developing countries. The findings underscore the necessity for appropriate ownership structures, independent boards, and robust audit committees to foster transparent and trustworthy financial reporting practices.

#### Limitations and Directions for Future Research:

The study has certain limitations that should be acknowledged. Firstly, it focuses solely on listed companies, which may not fully reflect the quality of information reported by unlisted companies, thus potentially restricting the overall understanding of corporate governance practices. Publicly traded corporations are just one institutional arrangement for productive activities, and excluding other forms may limit the generalizability of the findings. Secondly, many empirical studies relying on disclosed proxy data, there is a possibility that proxy disclosures may not capture all aspects of corporate governance practices comprehensively. The use of accrual methods for detecting earnings management also comes with inherent shortcomings, which need to be considered when interpreting the results. To enhance the knowledge in this area, future research should aim to compare these findings with studies conducted in other developing countries in Asia to gain a more comprehensive understanding of corporate governance practices in diverse contexts.

Based on the findings of the study, our conclusion is that in order to counteract the manager's excessive influence over the formulation of board and corporate decisions, which often neglects the preferences of minority shareholders, it is imperative for the SECP to establish a framework. This framework should not only empower minority shareholders but also ensure the protection of their interests.

The availability of comprehensive information plays a pivotal role in the decision-making process. Therefore, it is recommended that the SECP devise a policy that compels all companies to furnish complete and unrestricted information. Lastly, it is crucial for the SECP to ensure that annual reports of all organizations encompass thorough profiles of their board members and CEOs. This step will enable investors to distinguish between executive and nonexecutive board members, gaining insights into their educational and professional backgrounds.

In the future, there are various avenues for expanding this study. Currently, the study employs institutional ownership, family ownership, and insider ownership to gauge overall institutional stock holdings. However,

forthcoming researchers could opt to analyze financial and non-financial ownership separately. Moreover, within financial institutional ownership, it's possible to delve deeper and categorize ownership by entities such as banks, mutual funds, insurance companies, and pension funds. This approach would facilitate understanding the specific roles played by each of these entities.

As the research progresses, additional dimensions can be integrated. For instance, future investigations might incorporate factors like board meetings and auditor tenure to assess their influence on discretionary accruals. Lastly, a prospective enhancement to studies in this field could involve the development of a corporate governance index. This index could be fashioned by integrating the provisions of the PCCG (Principles of Corporate Governance and Code of Best Practice). The aim would be to assess how effective these codes are in constraining practices related to managing earnings.

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**Data Availability Statement:** The data that support the findings of this study are available in Pakistan Stock Exchange Limited at https://www.psx.com.pk/. These data were derived from the following resources available in the public domain https://www.psx.com.pk/.

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