Impact of Profitability, Firm Size and Investment Opportunities on Earning Quality: Evidence from Pakistan

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**ARTICLE DETAILS**

**ABSTRACT**

**Purpose:** This study aimed to examine the impact of profitability, firm size, and investment opportunities on earning quality of companies in Pakistan. For this purpose, 100 non-financial companies were selected from the top industries of Pakistan registered on the Pakistan Stock Exchange from 2014 to 2021. This study has taken earning quality as a dependent variable, while profitability, firm size and investment opportunities are used as the independent variables.

**Design/Methodology/Approach:** For the purpose of investigation, descriptive statistics are presented and the multi co-linearity test, Hausman test, and random effect regression model are conducted. A purposive sampling technique is used in this research.

**Findings:** The research indicates that the profitability and investment opportunities have a significant and positive effect on earning quality of the companies. On the other side, the research demonstrated that the firm size has a significant negative effect on earning quality.

**Implications/Originality/Value:** This study would help the investors and stakeholders to better understand the financial condition of the non-financial companies of Pakistan before investment. Depending upon all the results, it is recommended that all companies must improve their earning quality and present it without manipulation so that the investors and other stakeholders can make more investments and profits.

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Introduction
Among the most significant financial data indicators businesses disclose is net income, sometimes known as "earnings." Stock markets are very dependent on earnings surprises since profits are a key statistic used to evaluate a firm. Earnings in accrual-based financial accounts, like the majority of other expenditures, are only estimates of reality. Thus, earnings are determined using a variety of estimations, some of which might have a big influence on value calculations, including bad debt charges and depreciation expenditure. It is useful to comprehend the idea of "earnings quality" for this reason (Jiles, 2023). Profitability is one factor to consider when evaluating a company's success. As it can influence how shareholders and management make financial decisions, the corporation's income should be examined to see whether the earnings quality was good. Financial statement consumers may find it challenging when profits do not accurately reflect managerial effectiveness (Andriana et al., 2021).

Profit expansion is a rise or reduction in profit; a rise in business profits will influence this. According to the signal concept, a rising firm profit will send a good sign to the industry and might indicate the possibility of the corporation's future growth. Huge businesses, in particular, can boost profit expansion to be higher. This is because the firm has more overall assets, which increases the chance of profitable operations and increases the security of the organization's business continuation. Earnings information will be more appealing to shareholders for capital investments as business profits continue to rise. As a result, the efficiency of the corporation's earnings will increase with an ever-increasing profit rate (Warrad, 2017).

The diversity and quantity of a company's production capabilities and potential, or the quantity and range of services a company can provide its consumers at once, determine the size of the company. Because of the phenomena of economies of scale, the firm's size is crucial in the modern era. Large businesses can make commodities for less money than small businesses. Modern companies strive to grow in size to gain an edge over competitors by minimizing the manufacturing costs and boosting the market share (Shaheen & Malik, 2012). The scope of investments for businesses is described in the investment opportunities. Significant growth businesses may provide several investment options. This encourages the management side to make significant new investments. The basis for forecasting the future business growth is investment opportunities (IO). According to IO and flexible accruals, managers of organizations with strong investment opportunities commonly control discretionary accruals, which lower the quality of the consequences (Riyani et al., 2020).

Earnings Quality is a measurement of an organization's capability to better accurately estimate future cash flows from stated earnings. If the reported profits are handled in such a way that the projection of future cash flows relies on this inaccurately revealed quantity of earnings, then it is not possible to anticipate future cash flows with more accuracy whenever the earnings quality is low. Depending on the accruals in accountancy, earnings can more precisely anticipate future cash flows than existing cash flows since they supply more data for improved projection. Accruals may be viewed as poor indicators for forecasting future cash flows, even if they can be controlled by managers to highlight the firm's superior situation (Warrad, 2017).

The scope of investments for businesses is described in the investment opportunities. Significant growth businesses may provide several investment options. This encourages the management side to make significant new investments. The basis for forecasting the future business growth is investment opportunities (IO). Upcoming discretionary spending determines the value of IO. It may have an influence on how the investors, creditors, shareholders, and management feel about the business. Organizations with great potential for development are observed to be capable of
generating significant profits. Discretionary accruals and High IO are directly related. According to IO and flexible accruals, managers of organizations with strong investment opportunities commonly control discretionary accruals, which lower the quality of the consequences (Riyani et al., 2020). Thus, if the firm has a strong chance of expanding through IO, that situation, can improve its profit, resulting in a large response from the marketplace for the organization.

For this study, 100 non-financial companies of Pakistan were selected and listed in the Security Exchange Commission of Pakistan from 2014 to 2021. Out of the 921 industries in the Indian subcontinent, just 34 were left over when Pakistan gained its independence. These sectors collectively produced barely 7% of the GDP and engaged 26,000 people. These included the cotton textile, cotton ginning, sugar, rice husking, cigarette and flour milling businesses. In accordance with Purchasing Power Parity, the economies of Pakistan now ranks 22nd. The Pakistani economy prospered throughout time, now making up 64% of GDP, up from merely creating 7%. Cotton textile manufacturing, agricultural, automobile, cement, smoking, chemicals, equipment, and food processing are among the major industries (PJBF, 2023).

Literature Review

Pandaya et al. (2021) studied the impact of profitability, company size, and Investment Opportunities (IO) on earnings quality in food and beverage manufacturing businesses registered at IDX. They found no significant effects of profitability and firm size on earnings quality, but Investment Opportunities (IO) had a significantly positive influence on earnings quality. Andriana et al. (2021) also explored these factors' importance in predicting profit quality and found a positive correlation between higher-quality profits and profitability, scale, and investment prospects. Afzal et al. (2021) found no significant impact of dividend policy on earnings quality. Compensation committee and audit quality positively affected earning quality but negatively affected earning management. Lestari and Khafid (2021) discovered that liquidity and leverage improved the quality of profitability, while profitability and profit growth had little impact on earnings quality after controlling for firm size. Putra and Subowo (2016) found that firm size and accounting conservatism influenced earnings quality, while investment opportunities and leverage had no effect on the quality of profits.

Imaniyah and Maulita (2021) found that profit growth, liquidity, and investment opportunities significantly impact earnings quality in consumable product manufacturing businesses, while size has no influence on earnings quality. Siahaan (2013) demonstrated that investment opportunities affect profit quality, while the presence of an audit committee, independent commissioners, and managerial ownership does not impact profit quality. Listyaningsih (2020) showed that investment opportunities (IO) have an impact on profit quality, but effective corporate governance does not. Warrad (2017) discovered that both leverage and profitability have a significant effect on the quality of earnings. Murniati (2019) investigated various factors' impact on the earnings quality of manufacturing businesses, such as leverage, investment opportunities (IO), conservatism, audit firm reputation, liquidity, independent commissioner, and institutional ownership. The results indicated that none of these factors, with or without control variables, influenced earnings quality.

Anam and Afrohah (2020) found no influence of liquidity and firm size on earnings quality, but profit growth and firm size were affected by earnings quality. Mulyati et al. (2021) studied how firm size, leverage, liquidity, and investment opportunities (IO) impact earnings quality. Nurbach et al. (2019) discovered a positive correlation between earnings quality, board diversity, and debt covenants. Ghaizani et al. (2018) observed significant influence of good corporate governance, investment opportunities, and firm size on earnings quality of the LQ45 Index. Lan (2021) found that audit committee independence, firm age, and financial performance positively affect the quality of a company's earnings in Vietnam.
Ramdhan et al. (2023) found that managerial ownership and firm size do not influence earnings quality, but profitability negatively impacts it. Khanh and Hung (2020) discovered an adverse connection between Debt Maturity (DM) and Earnings Quality (EQ) in Vietnam, with no effect of tax on DM, and profit negatively impacting DM. Ahmad and Alrabba (2017) concluded that financial leverage significantly influences earnings quality in Food and Beverage companies on the Amman Stock Exchange (ASE). Cherkasova and Markina (2021) revealed that CEO attributes have a significant impact on earnings quality and future growth of a company. Do (2021) highlighted the importance of workforce health in affecting a company’s earnings quality and the role of individual health in the quality of the accounting function.

Musa and Abdelraheem (2022) found that corona pandemic negatively impacted Saudi economy and earnings quality in all Saudi national banks. Zahid (2018) concluded the positive impact of audit meeting and board composition on earning quality, negative impact from CEO duality and board size. Shehada (2019) explored no connection between earnings quality of listed banks on PEX and their intellectual capital from 2009 to 2017. Putri and Panggabean (2020) found that firm size, corporate governance, profitability, and growth opportunities affect value relevance of accounting earnings; profit from resources influences profit reaction coefficient. Gorji et al. (2023) concluded that trade credit benefits from earnings quality, especially with more comparable accounting information.

Mojtahedi (2014) found that intellectual capital significantly influenced earning quality in 100 Malaysian businesses, with a positive impact of firm size, but a negative relationship between the obligation-to-value proportion and earning quality. Sodan (2015) investigated the relationship between earnings quality in Eastern European countries from 2002 to 2011 and the extent of fair value application in financial reports. Lennox et al. (2016) examined the impact of earnings quality measures on year-end audit adjustments, revealing higher gathering quality with more significant effects on marked accumulations compared to absolute gatherings, and no reduction in the earnings distribution gap around zero. Rahmat et al. (2020) explored the impact of related party transactions (RPTs) on earnings quality in four East Asian nations, finding that the presence of controlling investors in East Asia is likely to lead to RPTs, which could improve the probability of firms’ profit control through discretionary accruals (DAC). Paz and Griffin (2014) investigated whether including stock options in CEO compensation improves earnings quality, suggesting a positive correlation between granting stock options to CEOs and earnings quality.


Gaio (2023) demonstrated a positive correlation between investment efficiency and earnings quality, suggesting higher earnings quality reduces investment inefficiencies. Yahay et al. (2017) revealed firm size affects earnings quality in Nigeria's listed deposit money banks, and integrated revenue-raising strategies have a significant positive impact on earnings quality. Parte-Esteban and Garcia (2014) discovered earnings quality in Spanish hotel companies is influenced by factors like internationalization, location, ownership structure, audit function, and others. Ye et al. (2010) found no significant gender-based differences in earnings quality between firms with
female and male top executives. Mashoka and Abu-hommous (2018) found higher conservatism in accounting, influenced by factors like investment levels, institutional investors, and market classification, leads to lower earnings quality.

**Research Methodology**

The mathematical model of our research topic indicates the relationship between the dependent variable- earning quality the independent variables; profitability, firm size and investment opportunities and the control variable- firm leverage. Here is the equation of our model;

\[
EQ = f (Prof + FS + InOp + FL) \text{........................................... (Equation)}
\]

Where;

EQ= Earning Quality
Prof= Profitability
FS= Firm Size
InOp = Investment opportunities

The sampling technique used for this research is random sampling and purposive sampling. Purposive sampling is a term used to describe a series of non-probability sampling methods in which components are chosen based on the qualities that you want in your sample. As a result, units are chosen "on purpose" in purposive sampling. It's also called as judgmental sampling, which depends on the investigator's judgment when deciding which people, situations, or occurrences would produce the most useful data for the study's goals. When you want to pay close attention to relatively small samples, purposeful sampling is the ideal method to utilize. Purposive sampling’s primary objective is to choose the situations, people, or groups that are most likely to contribute to the solution of the study problem. Purposive sampling is, therefore, most effective if you have considerable knowledge about your study issue. The reliability of your sample will increase as you have more facts (Nikolopoulou, 2022). The financial statements of the top 100 non-financial companies are obtained from 2014 to 2021 for the State Bank of Pakistan, and then these hundred companies are selected from the top companies of Pakistan. Afterwards, the research was started by exploring the financial statements.

It is observed after studying the previous research work that this research is strongly linked with agency theory. The principle, a more powerful entity, assigns tasks to the lower-level agents. The agency theory idea acquired popularity through the efforts of Michael C. Jensen and William Meckling (Vaidya, 2023). In agency theory, the interaction between the principle and the agent is examined. Barry Mitnick and Stephen Ross first proposed this hypothesis in 1973. Founders of businesses and investors have different interests than management, who acts as their representatives. The management anticipates that the high pay for the company's success in this research will be influenced by its profitability. At the same time, the owner favors a business that can carry on and continue to bring in money from investors and earnings. Agency conflicts may result in the management of revenue and earnings statements in a way that maximizes individual self-interest. The profits quality will drop if this happens (Andriana et al., 2021).

Another theory which relates to our research is stakeholder theory. Stakeholder theory represents an ethical idea that discusses how company outcomes, trends, and profits affect all parties involved, including shareholders, workers, financiers, the government, consumers, suppliers, etc. In order to maximize social and economic effects and obtain the greatest results by profit maximization, managers should evaluate, manage, and handle all of an organization's stakeholders in a way that emphasizes the value of their connection (Sharma, 2023). Stakeholder theory explains how stakeholders and corporate management interact, as Figure B. R. Edward Freeman proposed this hypothesis in 1984. The top management of the business is supposed to act responsibly and fulfil the demands of the stakeholders. On the other side, it is possible to
enhance internal profits while minimizing losses to stakeholders. As the company performs better over time, stakeholder confidence in the company will increase and vice versa. Investors include the government, society, creditors, consumers, workers, and suppliers. In this research, profitability has a substantial influence on stakeholders' wishes; consequently, management must run the business in a way that benefits all stakeholders (Andriana et al., 2021).

<table>
<thead>
<tr>
<th>Sr. #</th>
<th>Dependent/Independent/Control Variable</th>
<th>Variables</th>
<th>Abbreviation of Variables</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dependent Variable</td>
<td>Earning Quality</td>
<td>EQ</td>
<td>Cash flow from Operating Activities /Net Income</td>
</tr>
<tr>
<td>2</td>
<td>Independent Variable</td>
<td>Profitability</td>
<td>Prof</td>
<td>ROA = Net Profit / Total Assets</td>
</tr>
<tr>
<td>3</td>
<td>Independent Variable</td>
<td>Firm Size</td>
<td>FS</td>
<td>Ln*(Total Assets)</td>
</tr>
<tr>
<td>4</td>
<td>Independent Variable</td>
<td>Investment Opportunities</td>
<td>InOp</td>
<td>Market value to book of Assets = Market capitalization / Book value</td>
</tr>
<tr>
<td>5</td>
<td>Control Variable</td>
<td>Firm Leverage</td>
<td>FL</td>
<td>Total Liabilities / total Assets</td>
</tr>
</tbody>
</table>

The Results
This paper investigated the impact of profitability, firm size and investment opportunities on earning quality of 100 non-financial companies of Pakistan listed in the Pakistan Stock Exchange from 2014 to 2021. Earning quality is taken as the dependent variable in this research, while profitability, firm size and investment opportunities are considered independent variables of the research. The top 100 non-financial companies of Pakistan are selected to investigate whether these three variables have any impact on the earning quality of companies or not. For this purpose, the whole data is obtained from the State Bank of Pakistan. In this section, the results and discussion are presented in which the results include the descriptive statistics, multi co-linearity test, Hausman test, and Regression model. Table 1 indicates that the mean value, standard deviation, minimum and maximum value of all variables. Table 2 shows that there is no multi co-linearity problem in our regression model, which means the independent variables of our study are not interrelated. According to the findings of the multi co-linearity test, none of the independent variables had a Tolerance value of above 0.10.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
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<tbody>
<tr>
<td>EQ</td>
<td>800</td>
<td>-3.196458</td>
<td>116.3328</td>
<td>-3162.773</td>
<td>439.7035</td>
</tr>
<tr>
<td>Prof</td>
<td>800</td>
<td>0.033461</td>
<td>0.1417295</td>
<td>-1.978</td>
<td>0.5152706</td>
</tr>
<tr>
<td>FS</td>
<td>800</td>
<td>15.379880</td>
<td>1.744524</td>
<td>10.769</td>
<td>19.51528</td>
</tr>
<tr>
<td>InOp</td>
<td>800</td>
<td>42.131240</td>
<td>146.3679</td>
<td>-232.588</td>
<td>2482.12</td>
</tr>
<tr>
<td>FL</td>
<td>800</td>
<td>0.662397</td>
<td>0.5897466</td>
<td>0.007</td>
<td>5.983376</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>EQ</th>
<th>Prof</th>
<th>FS</th>
<th>InOp</th>
<th>FL</th>
</tr>
</thead>
</table>

Table 1: Descriptive Statistics

Table 2: Multi Co-Linearity Test
In Table 3, it can clearly be seen that the probability value of the random cross-section impact test is 0.1135, which is less than 0.05 and significant at 5%. It shows that H1 H2 and reject H2, which means that the best model in this study would be the random effect research model. Table 3, the condition is Prob> chi2, which means that the regression model would be significant if it is less than the probability. The result of our regression model is 0.0012, which is less than the probability and indicates that our model is significant. The significance level, commonly referred to as alpha, is an indicator of how much evidence is required in the sample to reject the null hypothesis and determine that the impact is statistically significant. There are three levels of significance that are 1%, 5% and 10% (Jim, 2023). According to Table 4, the condition is Prob> chi2, which means that the regression model would be significant if it is less than the probability. The result of our regression model is 0.0012, which is less than the probability and indicates that our model is significant.

<table>
<thead>
<tr>
<th>EQ</th>
<th>1.0000</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof</td>
<td>0.0099</td>
<td>1.0000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FS</td>
<td>-0.0172</td>
<td>0.2425</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>InOp</td>
<td>0.0046</td>
<td>0.1680</td>
<td>0.0840</td>
<td>1.0000</td>
</tr>
<tr>
<td>FL</td>
<td>0.0059</td>
<td>-0.3219</td>
<td>-0.1587</td>
<td>0.0182</td>
</tr>
</tbody>
</table>

According to Table 4, the significance level of profitability (Prof) is 0.000, which is less than 1%. However, its coefficient is 0.707 which indicates that profitability is positively impacting earning quality. However, the significance level of firm size (FS) is 0.331, and its coefficient is negative at -0.036. As the significance level is more than the probability, the firm size does not significantly impact the earning quality. The reason behind this phenomenon is that firm size is usually not the thing that can impact the earning quality of any company. The size of firm cannot justify that the company is making profit. On the other hand, the significance level of investment opportunities (InOp) is 0.014 and its coefficient is positive at 0.101 which means the variable of investment opportunities (InOp) is positively significant at 1%. However, the significance level of firm leverage (FL) is 0.092 which means it is significant at 10%. It means that firm leverage is significantly impacting the earning quality of the companies. Hence, all the independent variables except firm size are significantly influencing the earning quality as the coefficient values are positive.
Conclusion
After the whole analysis, calculation and investigation, it is concluded that there is positively significant relation between profitability and earning quality. The profitability is basically the overall income of the company, which is usually obtained from the income statement of the company, whereas the earning quality is the earning from the operations of the company. When the company is making higher profits it means that these profits are also coming from the operations of the company. Suppose the operations of the company are smooth and profitable. In that case, it will determine that the company has good earning quality, whereas if the operations are not smooth and profitable, then it means that the earning quality of that company is rough and poor, which is of course, bad information for the stakeholders. Companies with good profitability can improve their earning quality as profitability is considered the measure to evaluate the company's competency to generate earnings. If the company has high profitability, and it will definitely have good earning quality, which would attract investors and other stakeholders. However, the company's low profitability will indicate that bad earning quality which creates a bad image in front of the investors and other stakeholders.

After running the Hausman test and analyzing the random effect regression model, it is concluded that there is no relation between firm size and earning quality. It means that the expansion or compression of the firm does not affect the earning quality of the company. It may be possible that a small firm has good earning quality than a company with big size. Firm size can be bigger and smaller, and the expenses can be minimized and maximized but will not impact any company's earnings from operations. The firm size is a measure to evaluate the company's total assets, liabilities, and stock market valuation. Total assets and stock market value do not affect profit growth and earning quality. So, our hypothesis that the firm size positively and significantly affects earning quality is rejected.

Investment opportunities are one of the most important elements for every company. An increase in investment opportunities can increase the chances of profits of the company. Our finding supports that increase or decrease in investment opportunities would impact the earning quality of the company as this fluctuation would affect the company's operations. InOp is usually taken as the main indicator for investors and other stakeholders to invest their money in any company. There be more chances of growth for the company if its profits continue to grow in future which would benefit the investors. Consequently, the higher the profits, the more investment opportunities would be, resulting in better earning quality. This information is considered the most important information for the stakeholder and investors who want the most important information for the stakeholder and investors wanting to invest in certain companies.

<table>
<thead>
<tr>
<th>Sr. #</th>
<th>Hypothesis Statement</th>
<th>Accept</th>
<th>Reject</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>H1: Profitability has a significant and positive influence on earnings quality</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>H2: Firm size has a significant and positive effect on earnings quality</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>H3: Investment opportunities has a positive and significant influence on earnings quality</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

Recommendations and Limitations
After whole investigation and analysis, it is suggested that the investors need to pay more attention to the disclosure of important information in the financial statements of the company to
focus on the investment decisions as some companies may implement earnings management strategies to produce the kind of substantial profits that are reported in the financial statements. It is also recommended that investors should compare the operating net income and operating net cash flow of earning quality of the company. The profit would be more fit if the profit is close to the company's operating cash flows. By making it easier to comprehend how a company's profits are manipulated, this study will aid managers, investors, and analysts in their decision-making and analysis. This research only uses the top non-financial industries of Pakistan as a sample, but further research can be conducted by taking other industries like mining, finance, pharmaceutical, food and beverages, and services for more comprehensive and broad research analysis.

This research has been conducted and investigated with systematic procedures, but still, the study has many limitations. This study's independent variables are profitability, firm size and investment opportunities. However, many other variables like dividend policy, firm value, firm leverage, profit growth, management ownership, liquidity, and corporate governance can be used to investigate the impact on earning quality. This study has been conducted by analyzing the financial statements of the top 100 non-financial companies listed in the Pakistan Stock Exchange, but it is not sure to get the same result if further research would conducted on financial or other companies. The time period of our research is eight years, from 2014 to 2021, which is relatively short; that is why further studies can be conducted by taking a longer period of time so that the findings would be more accurate and exact.

References


