# Does financial reporting quality affect the investment efficiency of listed textile sector firms in Pakistan? A myth or reality

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**ABSTRACT – REZUMAT**

**Does financial reporting quality affect the investment efficiency of listed textile sector firms in Pakistan? A myth or reality**

*The study investigates the relationship between financial reporting quality and investment efficiency in Textile sector firms listed on the Pakistan Stock Exchange, due to the reason of being the highest-ranked sector with a maximum number of listed firms in Pakistan. We use financial reporting quality as an independent variable, investment efficiency as a dependent variable, and the firm's annual cash, assets tangibility, and return on assets as control variables. We analyse 100 randomly selected firms for the period 2005 to 2019. The study applies various estimators, namely Pooled OLS, Fixed Effects, and Random Effects to identify which model better predicts results. The results demonstrate that firm's financial reporting quality and ROA have a positive significant effect on the investment efficiency of these selected firms in all three models, but Random Effects Model estimates better coefficients than the counterparts. While the firm's annual cash predicts a positive insignificant effect on the investment efficiency in the case of all competing models. Asset's tangibility shows a negative significant effect on the investment efficiency of these firms. The study will help the academicians in their researches, decision-makers, and top management of this particular manufacturing sector in getting insight into framing and formulating their financial strategies.*

***Keywords:*** *FRQ, investment efficiency, textile sector, random effect, Pakistan*

**Calitatea raportării financiare influențează eficiența investițiilor în firmele din sectorul textil din Pakistan listate la bursă? Mit sau realitate**

*Studiul investighează relația dintre calitatea raportării financiare și eficiența investițiilor în firmele din sectorul textil listate la Bursa de Valori din Pakistan, datorită faptului că este sectorul cel mai înalt clasat cu numărul maxim de firme listate în Pakistan. Folosim calitatea raportării financiare ca variabilă independentă, eficiența investiției ca variabilă dependentă și numerarul anual al firmei, activele corporale și randamentul activelor ca variabile de control. Analizăm 100 de firme selectate aleatoriu pentru perioada 2005–2019. Studiul aplică diverși indicatori de estimare și anume Pooled OLS, Fixed Effects și Random Effects pentru a identifica modelul care preconizează mai bine rezultatele. Rezultatele demonstrează că ROA (randamentul activelor) și calitatea raportării financiare a firmei au o influență pozitivă semnificativă asupra eficienței investițiilor acestor firme selectate în toate cele trei modele, dar Random Effects Model estimează coeficienți mai buni decât omologii săi, în timp ce numerarul anual al firmei preconizează o influență pozitivă semnificativă asupra eficienței investiției, în cazul tuturor modelelor concurente. Activele corporale arată o influență negativă semnificativă asupra eficienței investiționale a acestor firme. Studiul îi va ajuta pe academicieni în cercetările lor, pe factorii de decizie și pe top managementul acestui sector de producție special să obțină o perspectivă în încadrarea și formularea strategiilor lor financiare.*

***Cuvinte-cheie:*** *FRQ, eficiența investițiilor, sectorul textil, efect aleatoriu, Pakistan*

## INTRODUCTION OF THE STUDY

Financial reporting quality entails the capability of financial statements in disclosing, providing, and transmitting the firm's financial and non-financial information as well as a comprehensive forecast of the future expected cash flows to the investors. Promulgation of high accounting standards keeps rank high of financial reporting which resultantly help the investors. The positive accounting theory suggests that financial reporting quality has two prominent dimensions i.e. signalling about the market and monitoring the managerial behaviour [1]. The repute of FRQ and accounting standard is attributed to various key factors, i.e. audit committee experience, and devotion, strict promulgation of the international Accounting standard board, creative mindset, and attitude of management [2]. The Financial reports are the key determinants of the accounting system which help the users in providing sufficient information in framing their economic decisions regarding the firm's performance. This dimension of the accounting system helps to examine past activities and operations efficiently and to forecast the possible future dimensions in this regard [3]. The quality of financial reports is a predictor of a well-communicated information

system of any firm which provides users more interested and accurate information of the firm's cash flow information. The Financial Reporting Quality helps in establishing the Standards of Accounting, which promote useful information for the decision-makers [4]. Financial accounting information can be very useful in fostering investment efficiency by providing meaningful insight to the decision-makers and thereby enhancing the performance of the firm, the trust, and the confidence of the stockholders and shareholders. Disclosure of high-quality information reduces the cost of financing and market inefficiency and yields long-term returns [5]. The drastic change and innovation in technology have caused a new scenario for the customers and entrepreneurs in socio-economic disposition. It helps in changing the behaviour through excellent management of the organization's rivalries. The firm's management needs to be dynamic, innovative, and creative as the world is shifting towards a knowledge economy, where wisdom, innovation, and creativity are vital for survival and helps inaccurate information and communication which change the dynamics of the firm and efficiency is encouraged in the firm's systems [6].

Accounting Information System is vital to deliver timely and accurate information, which helps the decision-makers to efficiently convey information to the public outside the firm [7]. The information provided in financial statements is the key source that helps to analyse asset quality in the decision process for financial reporting [8]. In designing an information system, it is important to evaluate various subsystems, which resultantly uplift the organization system of information. All firms are more driven towards adequate information and a true picture of the firm that will help managers in their decision-making process and would cause efficient and accurate decisions. Adequate information and making a decision based on this information resolve the issue of the firm regarding their accurate decision making, which eventually helps to achieve the firm's objectives [9]. Similarly, Choe [10] views that the best accounting information system will have a huge effect on the firm's overall performance. A well comprehensive strategy in terms of information disclosure over competitors will give a competitive edge to the dominant firm [11]. Similarly, Hassan [12] argues that management needs to provide financial reporting information that helps the users in their forecasting about cash flow from their investment. While Lobo and Zhou [13] assert that many world top scandals occurred due to low Financial Reporting as shareholders always demand a high quality of financial reports and accurate information. In a similar study, Khalifa, Othman [14] focus on the reporting quality as a tool to encourage efficiency in organization and provide strength to the portfolio of financial instruments of the firm.

Similarly, McNichols and Stubben [15], also explained the outcomes of the financial reporting quality in the way it helps to maximize the trust of the stockholders as well as stakeholders and promote efficiency in the firm's set of activities and operations. We conduct this study with the view that such studies are rarely found in the context of developing nations like Pakistan. Hence, it is a new emerging area, especially exploring firms in the Textile sector. Most of the research in the developed world consider financial reporting quality as a prominent indicator or determinant of financial performance, which provides a firm with a competitive advantage. Most of the studies on the subject have explored the developed part of the globe and provided suggestions for developing nations. Pakistan is a developing country where firms are desperate for the implementation of accounting standards and procedures with the spirit for the best interest of its corporate sectors to encourage transparency and the disclosure of information to ascertain the desired objects in terms of efficiency at both markets and firm-level. Some of the researches verified different results in the context of developing countries than the developed world [16]. We do not follow the blind eye technique for the data analysis; rather we test the data for the best suitable model it supports. In this regard, we use Pooled OLS, fixed effects, and random-effects models to predict results. There is no such study in developing markets, exploring the nexus of FRQ and investment efficiency, especially in the Pakistani context. Moreover, we examine the textile sector firms as representatives of the manufacturing sector which have not been previously explored in the context of Pakistan in such a composite manner. The study aims to measure and evaluate the financial reporting quality practices of the Textile sector firms to ascertain their strength and weaknesses and to investigate the relationship between Financial Reporting Quality and Investment Efficiency in these listed selected firms.

## LITERATURE REVIEW

The area of financial reporting has been widely explored in the developed world, and the empirical literature can be found with greater frequency**.** Biddle and Hilary [17] examined publicly traded firms in the United States and argued that financial reporting quality significantly affects the firm's investment efficiency. Similarly, some of the researchers confirmed that FRQ can encourage the disclosure of information and motivation of the stockholders [10]. While some believe that FRQ helps to get a competitive edge over others in the same market and industry [11]. Mendoza and Yelpo [18] certified the importance of FRQ and proclaimed that accounting transparency is playing a significant role in the firm's performance. Likewise, Li and Wang [19], also confirmed the importance of financial reporting quality in boosting the organizational size and performance and argued that FRQ practices with higher and greater frequency can affect the corporate real investment decisions. Admitting the positive outcomes of FRQ, Yeganeh and Taran [4] pointed out financial reporting as the strength of the firm, which can affect the firm size, performance, and investment decisions. Kinyariro [20], also confirmed the positive significant correlation

between financial reporting quality and investment, which supports the findings of that school of thought, viewing FRQ as the tool to uplift the firm, s efficiency. Healy and Palepu [21] argue that accurate information is attributed to FRQ, as due to it, a better picture is shown, which is highly trusted by investors. And the true cash flow disclosure helps investors in making their accurate decisions. KHODAEI and YAHYAEI [22] reported insignificant nexus between FRQ and investment efficiency. In a similar study, Chen, Hope [23] confirmed the contribution of FRQ in a firm's audit quality, management of leverage structure, and evaluation of financial structure. While, Flannery [24] argued that information efficiency will have a positive effect on the economy of the country in general, and the firm in specific. Berger and Udell [25], also validated a positive relationship between financial reporting and investment efficiency. While in contrast to those who believe that FRQ is positively and significantly associated with investment, Ortiz-Molina and Penas [26] reported an insignificant relationship between FRQ and investment efficiency. Similarly, Diamond [27], also reported an insignificant relationship between these two variables. Meyer, Becker [28] explored Chinese firms and argue that investment efficiency can be enhanced with proper financial reporting quality to boost the confidence and motivation of the stockholders. The same was confirmed by Child and Rodrigues [29] pointed out financial reporting as the strength of the firm, which can affect the firm size, performance, and investment decisions. Saghafi and Arab [30] found an insignificant effect of the FRQ on investment efficiency and similar results were obtained by another researcher [31]. Bharath, Sunder [32] asserted that financial reporting quality can enhance investment efficiency and help decision-makers. While some of the researchers argue that Financial Reporting Quality vitally contributes to the firm's financial standstill and builds the investors, trust [31]. Most of the researchers reported that financial reporting can make the decisions easy for the top management and help to enhance the volume of a firm's assets and performance Noravesh, Karami [7], also examined Iranian firms and found that FRQ can positively affect the investment efficiency. Likewise, Lai [33] argued that financial reporting quality is very vital for the firm's success and carries a significant effect on the firm's investment volume.

## RESEARCH METHODOLOGY

### Hypotheses of the study

$H_1$: There is a positive significant relationship between financial reporting quality and investment efficiency.

$H_2$: There is a positive significant relationship between return on assets and investment efficiency.

$H_3$: There is a positive significant relationship between the tangibility of a firm's assets and investment efficiency.

$H_4$: There is a positive significant relationship between corporate cash holdings and investment efficiency.

### Data, sampling and sources

This research investigates the Textile sector firms, so all listed firms in the Textile sector are the population of the study. The sample size represents the entire population for saving the time and resources of the researchers [34]. In the current research, the simple random sampling technique has been adopted. The study uses the data of 100 Pakistani Textile sector firms out of 145 listed firms on Pakistan Stock Exchange with maximum asset value for the period 2005 to 2019. The study covers the criteria of Roscoe [35], for the sample size and sufficiency, who argued that 10 times observations for each variable in the study are good enough. In the current research secondary data has been collected from the firm's annual reports.

### Specification of the econometric models

We use the panel data modelling approach due to the nature of the data. Hsiao [36] argues that panel data is superior to time series and cross-sectional data, due to its district characteristics. Panel data outline unobserved heterogeneity and provide a maximum number of data points, which resultantly causes more degree of freedom and drop down the issue of collinearity among explaining variables. Moreover, it combines both time series and cross-sectional data [37]. We follow previous studies that have used simple pooled OLS, Fixed Effect Model, and Random Effects Model [38]. Pooled OLS in an appropriate estimator to capture the individual effect as well as observable and unobservable variables. Moreover, pooled OLS generates efficient and consistent estimates of the explanatory variables [39]. We always expect a difference in the values of various variables across various firms in the same industry. If there are unobservable effects caused by heterogeneity, which are not isolated, they will keep volatile (inflating) the regression's and capture heterogeneity, fixed-effects or random-effects models are used [38]. We apply the following pooled OLS, fixed effect, and random effect models.

*Pooled OLS Model*

$$y_{it} = \beta x_{it} + az_i + \varepsilon_{it} \quad (1)$$

$$Investment\ eff = \beta_0 + \beta_1 FRQ + \beta_2 Annual\ Cash + + \beta_3 ROA + \beta_4 Assets\ Tang + \varepsilon_i \quad (2)$$

*Fixed Effects Model*

$$y_{it} = \beta x_{it} + \alpha_i + \varepsilon_{it} \quad (3)$$

$$Investment\ eff = \beta_0 + \beta_1 FRQ + \beta_2 Annual\ Cash + + \beta_3 ROA + \beta_4 Assets\ Tang + \varepsilon \quad (4)$$

*Random Effects Model*

$$y_{it} = \beta x_{it} + a + \mu_i \varepsilon_{it} \quad (5)$$

$$Investment\ eff = \beta_0 + \beta_1 FRQ + \beta_2 Annual\ Cash + + \beta_3 ROA + \beta_4 Assets\ Tang + \mu + \varepsilon \quad (6)$$

### Operational definitions and measurement

We use-dependent, independent and control variables in this study, i.e., investment efficiency as the dependent variable, financial reporting quality as an independent variable, and cash, asset tangibility, and ROA as control variables. The study measures Investment Efficiency as the increase in the firm's tangible plus intangible assets divided by the total assets of the firm. We follow the fundamentals of the previous researchers, who also similarly measured it [17]. We establish the following equation for investment efficiency:

$$Inv = \beta_0 + \beta_1 SG + \mu \quad (7)$$

where *Inv* is the sum of total investment and tangible assets increase over the period, *SG* – the change in sales growth. The Financial Reporting Quality in this research is measured through the Profit management calculation model, formally proposed by [15].
We ensure dividing all variables by the value of total assets at the beginning of the year. Residual of this equation represents a change in accounts receivable, which is not for a change in the sale. We use the absolute value of this figure multiplied by –1, describing the *FRQ*. A larger value in our case means higher *FRQ*. In this study, *ROA* is calculated as net profit/total assets. While cash is measured as the ratio of cash to total assets and Tangibility of assets predicts the ratio of fixed assets to total assets.

## RESULTS DISCUSSION

### Diagnostic tests

To satisfy the data for the feasibility of the analysis, heteroscedasticity, and autocorrelation were checked, in this regard, the following tests have been performed. The tests, s results demonstrate that there is no issue of heteroscedasticity and autocorrelation in the data, and the data is normal as all the reported results of these tests are insignificant which confirms no such issues in the data (table 1).

Table 1

| DIAGNOSTIC TESTS | | |
|---|---|---|
| **Tests** | **X2** | **Prob. Chi Sq.** |
| Breusch-Godfrey Serial Correlation LM test | 0.062 | 0.121 |
| Breusch-Pagan-Godfrey Heteroscedasticity test | 0.842 | 0.537 |
| Jarque-Bera test (Normality) | 0.512 | 0.401 |

### Pearson correlation analysis

Table 2 shows the correlation between a dependent variable and the independent variable of the study. Correlation is a statistical measure that talks about the direction and strength of the association between two variables. The results suggest that financial reporting quality positively significantly correlated with investment efficiency ($r = 17$), meaning that an increase in financial reporting quality will enhance the investment efficiency of Textile sector firms in Pakistan. Similarly, cash and ROA also show a positive correlation with the firm's investment efficiency, however assets tangibility shows a negative significant correlation with the investment efficiency of these listed firms ($r = –0.15$). Cohen [40] has stated the level of significance of correlation that starts from 0.1 and further elaborated its various dimensions i.e., weak, moderate, and strong correlation.

Table 2

| PEARSON CORRELATION ANALYSIS | | | | | |
|---|---|---|---|---|---|
| **Variables** | **InvtEff** | **F.R.Q** | **Annual Cash** | **ROA** | **Assets Tang** |
| Invt Effc | 1.0000 | | | | |
| F.R.Q | 0.3476 | 1.0000 | | | |
| Annual Cash | 0.0689 | 0.0234 | 1.0000 | | |
| ROA | 0.3245 | 0.0564 | 0.0389 | 1.0000 | |
| Assets Tang | –0.4148 | 0.0312 | 0.3209 | –0.1467 | 1.0000 |

### Regression analysis

Table 3 shows the regression analysis of the study. The results validate random effect as the best estimator that is why we consider the values of this model. The results demonstrate that firm financial reporting quality has positive significant effect on the Investment Efficiency ($\beta = 0.1903$, $p < 0.05$), the same kind of significantly positive effect on the firm's investment efficiency, has been documented by all three models. The results are in line with the findings of previous studies that argued that FRQ has a positive significant effect on a firm's investment efficiency [41]. The results predicting a positive but insignificant effect of cash, annually hold by these firms on the investment efficiency ($\beta = 0.0679$, $p > 0.05$), in all three models. The findings of the study are confirming the results of some previous studies, which obtained a positive insignificant results for the annual cash [42]. The results also demonstrate that ROA has positive significant effect on the investment efficiency of these selected firms, as the corresponding probability value is significant at 5% ($\beta = 0.2439$, $p < 0.05$) in all three models, verifying the significant effect of financial performance proxy ROA on the investment efficiency of these Textile sector firms in Pakistan. Some previous studies also validated similar results [43]. The results predicting a negative significant effect of assets tangibility on a firm's Investment efficiency, as the beta value and t-value are negatively and significant at 5% probability level ($\beta = –0.3675$, $p < 0.05$) in the models used in this study, verifying the negative significant effect of the asset tangibility on the investment efficiency of these sample firms. The results confirm the findings of some similar studies [43]. The R-squares reported are 26.187, 32.386 and 38.971 respectively by pooled OLS, Fixed Effects and Random Effects Model, validating that the random-effects model has better

Table 3

RESULTS OF POOLED OLS, FIXED EFFECTS, AND RANDOM-EFFECTS MODELS

| Variables | Pooled OLS | Fixed Effect | Random Effect |
|---|---|---|---|
| F.R.Q | 0.1903 | 0.2206 | 0.2654 |
| | (3.2101) | (3.6701) | (3.9600) |
| Annual Cash | 0.0353 | 0.0568 | 0.0679 |
| | (0.0561) | (0.0789) | (0.0800) |
| ROA | 0.1134 | 0.1327 | 0.2439 |
| | (3.1301) | (2.9810) | (3.6700) |
| Assets Tang | –0.1851 | –0.2963 | –0.3675 |
| | (–3.059) | (–4.1500) | (–4.3200) |
| R-Square | 26.187 | 32.386 | 38.971 |
| F-Statistics | 23.197 (0.001) | 32.672 (0.000) | - |
| Wald Chi | - | - | 45.977 (0.000) |
| LM test | 212.309 | | |
| (Pooled vs FE or RE) | (0.006) | | |
| | Fixed Effect or Random Effect is more appropriate than pooled OLS, as the reported value is significant at the 5% probability level. | | |
| Hausman test | 3.456 | | |
| (RE vs FE) | (0.103) | | |
| | Random Effect is appropriate as the reported value of the test is insignificant at a 5% probability level | | |

explanatory power than the rest of the two models. The Wald chi value of the Random Effects Model is highly significant in comparison to the F-values of the counterpart models, this justifies and confirm that the Random Effects Model is a preferred model over the rest of the two models.

## CONCLUSION

Financial reporting quality can enhance investment efficiency by declining asymmetries of information and developing the trust and confidence of the investors. In this competitive business world, financial reporting and corporate disclosures are vital for the efficiency and competitive performance of a firm. Pakistan Textile sector is one of the biggest sectors in terms of the number of listed firms. This study aimed to investigate the effects of financial reporting quality on investment efficiency. The study analysed Textile sector firms as representative of the manufacturing sector. We used various control variables along with the independent variable financial reporting quality. The study measured and calculated financial reporting quality and investment efficiency as per the models proposed by [17]. The Findings of the study are very much consistent with results documented by previous studies. The results demonstrate that a firm's financial reporting quality and ROA have a positive significant effect on the investment efficiency of these selected firms, verifying the findings of past studies that predicted similar results [44]. While the firm's annual cash predicts a positive insignificant effect on the investment efficiency confirming the results in line with previous studies [45]. However, asset tangibility shows a negative significant effect on the investment efficiency of these firms [46]. As the results in our study claimed the significant effect of the financial reporting quality on the investment efficiency, therefore firms in Pakistan should practice well adequate and internally certified accounting and reporting systems to entice investors' confidence in buying the equity of the firm. Such attempts will help the profit maximization strategies of firms listed in the textile sector, and will be an eye-opener for the rest of the firms in other sectors to focus on their reporting quality. Central Bank should interfere in this regard to make the financial reporting quality of the firms more adequate and transparent. Based on the findings the Security and Exchange Commission of Pakistan should make various dimensions of corporate disclosure mandatory for listed firms in general, and the textile sector in particular. Moreover, the compliance of accounting standards that are acceptable internationally must be ensured in the prevailing financial reporting of these selected firms. Also, non-compliance regarding quality financial reporting must lead to the de-listing of the firm as a penalty announcement if found their failure during conduct of an audit by the professional auditor. Future studies should use the combination of both accounting base attributes i.e., accrual quality, persistence, predictability, and smoothness, and market base attributes i.e., conservatism, timelines, and value relevance in the context of Pakistan. Similar studies if conducted in the future can use the moderating and mediating effect of corporate governance, audit quality, and corporate disclosure. Moreover, in similar studies comparison of the manufacturing sector and financial firms can also be a vital addition to the literature. While SEM is also a better choice in future studies to cover the advanced modelling perspective. Moreover, a comparative study of Pakistani textile firms and Bangladeshi textile firms will also be a novel work. Our study is confined to textile sector firms which is why the results will not be generalizable to other sector firms. Secondly, different measurement techniques of the variables and a huge sample size may affect the results.

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