The Moderating Impact of Firm Characteristics on Free Cash Flows and Financial Performance: Evidence from Pakistan Stock Exchange

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Abstract
This study aims to discover effect of firm characteristics on the linkage of free cash flows and firm financial performance. Precisely, the current study has two main objectives: first, to setup the relationship between free cash flows and financial performance of non-financial firms; secondly, to investigate the moderating impact of firm characteristics of this relationship. The firm characteristics considered in this study are firm size and age. The study used secondary panel data which was obtained from 95 non-financial firms registered at PSX for the period of 2009-2019. Regression analysis was used in data evaluation. Results pointed out that free cash flows have substantial positive effect on financial performance, while firm' characteristics have a negative significant moderating effect on this relationship. The key academic input of the study is that free cash flows have a positive statistically significant effect on financial performance. The study suggests that firm managers, shareholders, and practitioners should focus more on the need for firms to generate more FCF.

Keywords: Firm Age, Firm Size (FS), Free Cash Flows (FCF), Firm Performance (FP), Pakistan Stock Exchange (PSX)

Introduction

The main goal of owners of any firm is to increase their worth by enhancing the value of their firm whereas, the manager's objectives may comprise of enhancement of their worth. Due to differences in objectives, the firm suffers as the managers and the owners work only for their goals and not for the enrichment of firm value. Due to power on the decision making of the firm, the managers made such decisions that are in their favor due to such decisions the entire firm and its shareholders will suffer. They may tend to invest in projects beneficial for them only; generating negative net present values (NPV) leading towards agency problems among the owners and the managers. This implies a waste of FCF implying the FCF hypothesis as defined by Jensen in presenting his agency theory (Jensen & Meckling, 1976). The impact of financial and non-financial attributes of the firm on its financial performance is examined in various empirical literature. The attributes commonly used for examination of such impact are Firm Size (FS), age of the firm (FA), diversification of the firm to avoid losses, liquidity of the firm, and firm's leverage. (Bist, Mali, Puri, & Bhattarai, 2017; De Kok, Fris, & Brouwer, 2006; & Dioha, Mohammed, & Okpanachi, 2018)The main objective is to explicitly mark the hypothesis of FCF and agency theory to understand how attributes of firm affect the linkage of FCF and performance of non-financial firms indexed at PSX. The attributes used in this study including firm size (FS) and firm age (FA) because literature indicates that they are the most commonly used, and their impact on the linkage of Free Cash Flows and financial performance of the firm is more significant (Mukras & Nzioka, 2015).

Free Cash flows (FCF)

FCF are the cash that is left in the business after meeting all the necessary expenditures. Richardson (2006) explained FCF as the leftover cash after paying for required expenditures including the maintenance of

assets, investing in projects yielding positive net present values. Various strategic and finance literature showed that the estimation of FCF is based on different methods. The common method used to calculate the FCFs shown by the assets employed (Lehn & Poulsen, 1989). Arslan and Karan (2007) evaluated the FCFs as operating free cash flows minus expenditure required for capital investment separated by employed total assets of the firms (TA).

Firm Characteristics

The impact of financial and non-financial attributes of the firm on its financial performance is examined in the various empirical literature. The attributes commonly used to examine such impact are firm size (FS), age of the firm (FA), diversification of the firm to avoid losses, liquidity of the firm, and firm's leverage. A study conducted by (Dioha, Mohammed, & Okpanachi, 2018) estimated the influence of firm specific characteristics on the productivity of Nigerian firms. Measurement of profitability was based on Return on Sales (ROS), whereas firm size (FS), liquidity, sales growth, firm age (FA), and leverage were used as proxies for firms' attributes. Bist, Mali, SabitaPuri, RK, and Bhattarai (2017) examined the linkage among the firm's attributes and the firm' financial performance. The sample used for analysis was based on insurance companies in Nepal. The period for analysis was based on 2008-2016. The analysis was done using the multiple regression analysis methods. Results revealed that growth in sales and leverage of firms is positively related to a firm's financial performance (FP) of firms. In contrast, the diversification of risk, liquidity of firms, and size of the firm were adversely related to firm performance.

Firm Performance

Financial performance (FP) defined as a capability of a firm to gain its strategic financial outcomes as dignified against its proposed yields (Sun, Zhao, & Cho, 2019). On the other hand, Mutende et al., (2017) described FP as the ability of the firm to attain its intended financial outcomes calculated by its proposed productions. Gleason and Barnum (1982) described robust performance as the ability of the firm to attain intended results. The study of (Hult et al., 2008) provided an interpretation of performance. Performance comprised of three forms (i) Financial performance (FP) (ii) Operational performance (OP), (iii), and overall effectiveness of the organization. Various studies addressed the subject of measuring the performance of an organization through certain indicators (Hult et al., 2008); (Richardson, 2006); (Zizlavsky, 2016) used ROS, ROA, ROI, and ROE to measure the financial performance of firm. Whereas (Ogunmokun, 2017) used the Return on equity (ROE) to measure financial performance.

Research Questions

This study addressed the following research questions:

1. What is the linkage among operating free cash flows (FCF) and firm financial performance (FP)?
2. What is the moderating impact of firm' traits on the linkage of the firm operating free cash flows (FCF) and financial performance (FP)? Traits included firm size (FS) and firm age (FA).

Research Problem and Objective

The proposed free cash flow theory of Jensen (1976) stated, introducing debt will decrease agency costs (Jensen & Meckling, 1976). Due to the presence of debt, the managers are bound to make and fulfill the obligations of debt holders which force them to make prudent decisions that are beneficial for the company. According to the FCF hypothesis, in the presence of surplus cash flows, managers may invest in adverse NPV projects. Managers' do not care about the money of the shareholders rather they benefit themselves only. Findings by (Mutende et al., 2017) showed that the firm' financial performance is positively impacted with the presence of free cash flows whereas features of the firm including firm age and firm size; put negative substantial moderating influence on the connection of operating FCFs and firm financial performance. Connection among the firm age and its productivity were examined by (Brouwer et al., 2005) The results revealed that they are very few signs of the relationship among the age of the firm with its productivity. Every sector has a different growth rate and productivity levels and it varies accordingly with the firm's size (FS).

The results revealed that there is no correlation between productivity and age of the firm. The results of the above studies showed inconsistent and mixed findings of the FCF hypothesis, this study finds how the presence of operating Free cash flows in an organization affect the performance of the firms. The second objective of this study is to calculate the moderating impact of firm attributes; including its size (FS) and its age (FA) on the linkage of operating FCF and FP.

Significance of the Study

This study is beneficial for shareholders and external stakeholders too. As the main motive of any shareholder is to earn profit. Management must work in the best interest of the company' shareholders. This study will be helpful for shareholders as they are the real owners of the company, the presence of cash flow in an organization enables the management to invest in profitable projects which impacts positively on the performance of firms, which in turn increases shareholder's wealth. The shareholders will be able to understand that this cash flow is appropriately invested by the management. Stakeholders are the relevant persons who have a direct or indirect interest in a particular entity. Stakeholders are largely worried about the financial performance, financial position, and cash flows of the entity, primarily its free cash flows. Generally, stakeholders have a strong perception that investment in a large, mature firm is safe. Firm size depicts a strong signal about its operations, leading to larger revenues and profits, eventually yielding higher returns. Firm size can be measured in terms of total assets, total sales revenue, or total equity of the business. As the entities move upward in their life cycle, they tend to achieve growth in terms of strong financial indicators, they become prominent and eventually conduct their day-to-day operations in an efficient manner owing to the learning effect. Older firms have greater experience and knowledge of the market and ongoing operations, which help them to generate strong financial results, eventually creating a positive impact on relevant stakeholders, including prospective investors. This study would be an interpreter in sectors other than the sample used and will benefit directors, regulatory authorities, and investors to better understand role and linkage among these variables. They are in a good position to gain in-depth knowledge of these variables and will help them to resolve the surrounding myths.

Literature Review

Financial Performance of Firm (FP) and Free Cash Flows

Chibuike and Celestine (2022) examined the effect of Management of free cash flows on (FP). The study consists of population of ten (10) listed pharmaceutical companies in Nigeria. Data was gathered from annual reports of companies from 2011 to 2020. Results showed affirmative and irrelevant effect of operating activities on liquidity. Moreover, result shows a positive and insignificant effect of investing activities on liquidity. Moreover, result indicates adverse but substantial effect of financing activities on the liquidity of listed pharmaceutical companies in Nigeria. It was proposed that listed pharmaceutical companies should be enhanced to have a reasonable strategy of controlling cash flows so that the firm's effectiveness may be enhanced. It was further suggested that they should re-calculate strategies for management of cash flows to enhance the generation of more cash reserves. Yo (2020) studied the connection between board leadership organization and firm performance. Findings shows diverse results are because of various performance measures used, research designs, selection of data sampling and approach of dealing with endogeneity issues. Future researchers may advance to robustness of research by using different theoretical lenses to consider how different governance factors moderate the relationship among board leadership and financial performance of firms. Gregory and Wang (2010) studied the impact of the presence of free cash flows (FCFs) on a firm's financial performance (FP). By employing the regression model, a sample of 505 listed firms from Taiwan Stock Exchange for 5 years (2002-2007) was used for analysis. The results of the study were conflicting. On the one side, the finding revealed that free cash flows (FCFs) statistically affected the (FP) of the firm. On the other side, it employs that the presence of FCFs negatively affecting the financial performance due to unusual expenditures made by the management. A Gregory (2005) calculated the linkage

among financial performances and FCF. Findings revealed that a merger is more beneficial with the firm having free cash in contrast to the firm having lesser free cash flows. In the study, the employed hypothesis was tested using "long term returns", "analyzed announcement month return". If daily returns around announcements were used in the study the results different. Moreover, the study focused on financial performance only. Luo (2008) found that companies with excessive cash flows experienced lesser future returns. The study found that debt financing can further control overinvestment behaviors. Arslan and Karan (2007) evaluated the FCFs as operating free cash flows minus expenditure required for capital investment separated by employed total assets of the firms (TA). This measure of FCF nullified the fact that expenditure on capital also inculcates the assets present in an organization and the chances available to organizations for investment. Therefore this method has shown lesser free cash flows. Kamran, Zhao, and Ambreen (2017) improved this method of calculating the free cash flow, he calculated the FCFs as (Operating free cash flows minus expenditure required for capital investment divided by employed total assets of the firm for the time frame of three (3) years). In this study, FCF is measured as defined by (Mutende et al., 2017) as Free Cash Flows as cash available after making necessary adjustments for non-cash expenses and changes in capital expenditures (CAPEX) to remove inconsistences.

Free Cash Flows (FC), Firm Characteristics (FA and FS) & Financial Performance (FP)

An organization comprises of various features i.e. sales growth, managerial structure, size of firm, leverage, liquidity, and age of the firm. These features directly and indirectly contributed to the performance of firms. According to Kogan (2012) & McKnight (2009) firm characteristics included the specific attributes of the firm including its age, size, leverage, liquidity, a pattern of sales and assets growth, the structure of ownership, characteristics and composition of BOD, payout policies (dividends) and growth opportunities. Lasisi (2017) studied the linkage of firm attributes with profitability. Data used for analysis was based on listed agricultural firms at the Nigerian Stock Exchange covering 9 years (2008-2016). The analysis was based on panel data. Findings revealed that growth in sales and liquidity is positively correlated with performance whereas leverage of the firm is negatively related to profitability. Coad (2013) examined how the company's performance varies with its age (FA). Spanish Manufacturing Companies Board for 9 years (1998-2006) is used as a sample for analysis. The results suggest that companies advance with age, with an increase in the life of the company that you will witness because it was noted that aging companies enjoy stability in their profits, their debt ratio is lesser and equity ratios are high, their productivity is at maximum level and with time, their size also increases. As with the age of the company increases, it can easily convert growth in sales into the growth in earnings and productivity. However, findings by (Loderer, 2010) were in contrast with the above findings. It considered whether the profitability of a firm decline with age. The results revealed that there is an adverse correlation amid the age and profitability of the company, and it employed different estimation techniques and regression specifications and the method of measuring the age of the company. Babalola (2013) did significant academic work on learning the connection among profitability of firms and firm size. The investigation was based on the data of Nigerian stock exchange for the years (2000-2009), results show a positive connotation among firm size and firm profitability. Doğan (2013) found that most studies on examining the linkage of firm size and profitability, has established a positive linkage among firm size and firm' profitability; still, there exist further need to find this relationship among firm size and profitability of firm based on strong evidence-based on fluctuating data sets. Isik (2017) examined the relationship by using the manufacturing industry of turkey. Their findings are contrary to the above studies. Findings revealed that there is no connection between firm size (FS) and profitability. Findings also revealed that in a huge size manufacturing industry, the relationship is definite and clear only in that industry, and in some circumstances, there was an inverse linkage of FS and FP. In the context of Pakistan, there are limited studies on the assessment of the relationship among these variables. Azhar (2019b); Shah (2004); Vij (2015) tried to examine the firm's profitability with varying proportions of working capital. To know the realistic nature of the linkage among the size and productivity of firms more literary work is required to understand the different

nature of findings. The main objective is to explicitly mark the hypothesis of FCF to find out how attributes of firm affect the linkage of FCF and performance of non-financial firms indexed at PSX. The attributes used in this study including firm size (FS) and firm age (FA) because the abovementioned literature indicates that they are the most commonly used, and their impact on the linkage of Free Cash Flows and financial performance of the firm is more significant.

Theoretical Support: Agency Theory

This theory is attributable to (Jensen & Meckling, 1976), who advocated that core linkage exists between principal and agent, and agency problem emerges when managers start working for theor own self interests rather than safeguarding their oweners. The shareholders who are the owners want to maximize the value of entire firm,which eventually improves their wealth, whereas managers solely think of their own stake. This difference of goals and objectives between two primary stakeholders lead to lower value of firm and it in turn creates lower free cash flows available to be distributed among resource providers. It is the duty of managers to protect the interests ands goals of shareholders in an effective manner, leading to smooth conduct of business operations, making profitable investments, generating greater sales revenues and profits,leading to improved free cash flows available for distribution.

Stakeholder Theory

This theory was advocated by (Freeman & Medoff, 1984). This theory argued that not only shareholders are the main stakeholder in any firm but also the other stakeholders assocaited with the firm are also equally important., so value creation is equally pertinent for all the stakeholders.It is the duty of executive managers to allign the interests ands goals of all the stakeholders including internal and external in an effective manner, which will eventually improve and enhance the confodence of customers as well, leading to customer loyalty, which in turn will lead to increased buying, which will generetae greater revenues for the entities, yielding higher profitability, leading to augmented free csh flows with the entity.

Shareholder Theory

Friedman (1970) believed that firms only and only have one responsibility towards its owner's which is their wealth maximization, and the goal of any firm is to generate value for its shareholders only. Firms have nothing to do with any other aspect apart from investing in profitable avenues, which may yield lucrative returns, eventually leading to serving the interests of their owners in the form of superior earnings, ultimately providing larger free cash flows.

Research Hypothesis

H1: Free cash flows have a significant effect on the financial performance of firms listed at the Pakistan Stock Exchange.

H2: Firm characteristics have a significant moderating effect on the relationship between free cash flows and financial performance of firms listed at Pakistan Stock Exchange.

Research Methodology

This study is based on existing theory and develops hypotheses that can be verified. The research design adopted for this study was a cross-sectional descriptive survey of all non-financial firms listed at the PSX. Secondary data is taken from the annual reports published by the companies listed in PSX (KSE-100 index). The data collection has been made from the joint stock valuation published by the State bank of Pakistan (SBP) and Pakistan Stock Exchange (PSX). The sample selected in this study is based on non-financial sector companies (NFS) over 11 years starting from 2009-2019.

Free Cash Flows (FCF) and Firm Performance (FP)

The objective of this research is to recognize and study the linkage among free cash flows (FCF), firm size (FS), firm age (FA), and firm performance (FP). Whereas regression equation used for regression analysis is

as under: The regression equations for the calculation of the first hypothesis is as follows:

$\bar{Q}ROA_{it} = \acute{\alpha}_0 + \beta_1 FCF_{it} + €_{it}$ ----------Eq-1

Tobin's $Q_{it} = \acute{\alpha}_0 + \beta_1 FCF_{it} + €_{it}$ ----------Eq-2

In the above-stated equation.

$\bar{Q}$ROA=Firm' financial performance, ROA

$\bar{Q}$Tobin's Q= Financial performance of a firm in terms of Tobin's Q

$\acute{\alpha}$ is the Constant term; β shows a beta coefficient.

FCF= Operating Free cash flows (FCF)

€ = Error term.

The regression equations to examine the second hypothesis, representing the moderating variables are as follows:

Firm Age:

$\bar{Q}ROA_{it} = \acute{\alpha}_0 + \beta_1 FCF_{it} + \beta_2 AGE_{it} + \beta_3 AGE_{it} * \beta_4 FCF_{it} + €_{it}$ ----------Eq-2a

$\bar{Q}$Tobin's $Q_{it} = \acute{\alpha}_{it} + \beta_1 FCF_{it} + \beta_2 AGE_{it} + \beta_3 AGE_{it} * \beta_4 FCF_{it} + €_{it}$ ----------Eq- (2ai)

Firm Size:

$\bar{Q}ROA_{it} = \acute{\alpha}_0 + \beta_1 FCF_{it} + \beta_2 SIZ_{it} + \beta_3 SIZ_{it} * \beta_4 FCF_{it} + €_{it}$ ----------Eq- (2b)

$\bar{Q}$Tobin's $Q_{it} = \acute{\alpha}_0 + \beta_1 FCF_{it} + \beta_2 SIZ_{it} + \beta_3 SIZ_{it} * \beta_4 FCF_{it} + €_{it}$ ----------Eq- (2bi)

i" = cross sections "t"= time series "€"= error term

ROA_{it}= Generated Return on assets of a firm 'i'

FCF€= Free Cash flows in year t

FS_{it}= Firm Size (FS)

FA_{it}= Firm Age (FA)

β_1, β_2, β_3, and β_4 are estimated coefficient of explanatory variables.

The above stated equation 2a, 2(a)(i) and 2b, 2b(i) presented the model of moderation. The moderation happened if the independent variable i.e. FCF and the moderating variables firm size and firm age are not significant with the interaction term. Whereas, if FCF and moderating variables are widespread with the interaction time period, then the impact of moderation is also significant (Adelegan, 2011). To quantify the impact, the coefficient of 3 and 4 were added. This impact of moderation; FS and FA is statistically described as an interface that impacts the strength and/or **course** of the relation among FP and FCF (Baron, 1986). The term * in the above-stated model indicates moderation.

Data Analysis Descriptive statistics

Descriptive statistics included the mean, maximum value, median, and standard deviation of dependent, independent, and moderating variables. The mean is the average, the median is the number in the middle, and the standard deviation is the how disperse is data from mean. In the data the maximum value indicates the highest value and minimum shows the lower value. Table 4.1 represents the values representing various descriptive statistics of study variables including independent variable (FCF), dependent variable (FP) measured by (ROA & Tobin's Q), and moderators (FS & FA).

Table 4.1 Descriptive Statistics

Variables	Obs	Med	Max	Mean	SD
ROA	950	6.81	1292	8.89	45.04
Tobin Q	950	0.62	2.78	0.55	0.59
FCF	950	-29251.5	26956	11265	163.92
FSIZE	950	6933954	17902463	35835632	95405724
FAGE	950	41	159	46	23

Correlation Analysis:

Correlation analysis was employed to examine the presence of linkage among study variables including (firm financial performance, (ROA) (Tobin's Q) free cash flows (FCFs), firm size (FS), and Firm Age (FA), as depicted by Table 4.2. The most common reliable measure used for the establishment of an association between the variables is the Pearson correlation. The value of Pearson correlation varies within the range of -1 and +1 (Bluman, 2009). The positive correlation is the addition in one variable in corresponding additions in other, whereas negative correlation is the additions in one variable leads towards subtraction in other variables i.e. reverse relationship among variables. If correlation doesn't exist among the variables under study this is called as no correlation. To examine the linkage among variables, correlation is used in this study.

Table 4.2 Correlation Analysis between Dependent, Independent Variable and Moderating Variables

Variables	1	2	3	4	5
Tobin Q	1				
ROA	0.681**	1			
FCF	0.107**	0.047*	1		
FSIZE	0.033**	0.123*	0.061	1	
FAGE	0.304**	0.226*	-0.186*	0.0164	1

FCF, FP (ROA), firm attributes (FS & FA)

The correlation results revealed that the independent variable (FCF) is positively correlated with the Dependent variable, i.e. firm performance (ROA) (r = 0.047). Results show that the moderating variable, i.e. firm size is positively correlated with the dependent variable, i.e. Firm performance (FP) (r = 0.123). Results show that the moderating variable, i.e. firm age is positively correlated with the dependent variable, i.e. Firm performance (FP) (r = 0.226).

FCF, FP (Tobin's Q), firm attributes (FS & FA)

The correlation results revealed that the independent variable (FCF) is positively correlated with DV, i.e. firm performance (Tobin's Q) (r = 0.681). Results show that the moderating variable, i.e. firm size is positively correlated with the dependent variable, i.e. Firm performance (FP) (r = 0.033). Results show that the moderating variable, i.e. firm age is positively correlated with the dependent variable, i.e. Firm performance (FP) (r = 0.304).

Regression Analysis:

Hypothesis 1:

In the first place test was carried out to examine our first hypothesis i.e. = H1: Free cash flows have an important effect on the firm' financial performance listed at the Pakistan Stock Exchange (PSX).

To find which model of regression is properly fit in our data, we have executed a fixed and random effect

model of regression. To calculate the impact of FCF on FP, the Hausman test has been executed to contrast among the random and fixed models and then find the best-fitted model for our analysis. The result in the below table 4.3 shows that the prob>chi^2 of using the ROA and Tobin's Q

Therefore, we have employed a fixed-effect model in our analysis.

4.3 Hausman Test for Fixed Effect and Random Effect

Description	ROA	Tobin Q
Chi Square	3.56	6.05
Prob > Chi Square	0.0000	0.0000

HO: FCF has no significant impact on financial performance (ROA)

The results in the below table 4.4 specified that FCF describes 72% of the variability in (ROA). It means that a 28% variation in ROA is represented by other factors not incorporated in this study. Since the t stats probability for the free cash flow is equal to 0.016 and the p value< 0.05, therefore, the study rejected the null hypothesis. From the F stats, it can be interpreted that "F-statistics" is significant as a value shows 25% (p<0.01), which are both significant at a 5% significance level. The "T statistics" value is 2.48 greater than 1.96 indicating the good result for our regression analysis.

Table 4.4 Results of Regression Analysis

Predictors	Financial Performance (ROA)			
Variable	B Coefficient	SE	T Stats	P Value
FCF	0.36	0.14516	2.48	0.016
C	0.058	0.0542	1.07	0.000
R Square	0.72			
Adjusted R Square	0.69			
F Stats	25			
P Value	0.000			

$$\bar{Q}ROA = 0.058 + 0.36FCF + €$$

Where $\bar{Q}$ROA shows the financial performance of firms indicated by Return generated on assets.

HO: FCF has no substantial impact on financial performance (Tobin's Q)

Results in the below table 4.5 represent that FCF describes 56% of the variability in FP of firm calculated by (Tobin's Q), meaning that only 44% variation in (FP) is described by other variables not incorporated in this study. The F stats equals to 18 indicates that this model has strong explanatory powers. As the p value < 0.05, therefore rejected the null hypothesis i.e. FCF has no substantial impact on performance (measured in terms of Tobin's Q). The "T statistics" value is 4.03 greater than 1.96 indicating the good result for our regression analysis.

Table 4.5 Results of Regression Analysis

Predictors	Financial Performance (Tobin Q)			
Variable	B Coefficient	SE	T Stats	P Value
FCF	0.41	0.1017	4.03	0.0001
C	0.558	0.1817	3.07	0.0000
R Square	0.56			

Adjusted R Square	0.54
F Stats	18
P Value	0.0000

The regression equation employing the above relationship is as under;

$$\bar{Q}\ Tobin's\ Q\ = \acute{\alpha} + \beta FCF + €$$

$$\bar{Q}\ Tobin's\ Q = 0.558 + 0.41 FCF + €$$

Hypothesis 2:

H2: Features of the firm including (FS) and (FA) have a major moderating impact among FCF and financial performance of firms indexed at PSX: Second objective of the study is to find the moderating impact of firms' attributes (FS) and Firm Age (FA) on the linkage of operating (FCF) and firm financial performance (FP). To find which model of regression is properly fit in our data, we have executed a fixed and random effect model of regression. To examine the influence of FCFs on FP of firms, with the moderation of FS and FA, the Hausman test has been executed to contrast among the random and fixed models. The result in the below table 4.6 shows that the prob>chi^2, Therefore, we have employed a fixed-effect model in our analysis.

Table 4.6 Test Statistics

Test	Observation	Statistics	Statistics value	Degree of Freedom	P Value
Hausman	950	Chi square	3.5	1	0.005

ROA, FCF, and Firm Attributes (FS & FA)

Table 4.7 reveals that the constant is significant (negative), indicated by the beta coefficient of -0.016, p-value 0.045. Findings show that firm attributes show a negative moderating impact on the linkage among (FCF) and FP (measured in terms of ROA). The findings shows that firm age has a coefficient= -0.510 and a p-value = 0.0255 which is significant at a 5% significance level, whereas FS has positive coefficient of 0.321 and p-value = 0.0321. The overall impact is assigned to the greater negative impact of FA. Findings show that the impact of firm attributes (FS and FA) explains 72% variations in (ROA) with the linkage among FCF and FP (ROA). Whereas the 28% variations are due to other factors that are not considered in our study. Therefore, we have rejected the null hypothesis.

Table 4.7 Results of Regression Analysis

Predictors	Financial Performance (ROA)			
Variable	**B Coefficient**	**SE**	**T Stats**	**P Value**
C	-0.016	0.128	0.125	0.045
FCF	0.152	0.0162	2.48	0.038
FSIZE	0.321	0.087	3.69	0.0321
FAGE	-0.510	0.451	1.13	0.0255
R Square	0.72			
Adjusted R Square	0.69			
F Stats	25			
P Value	0.0000			

Regression equation representing the above linkage is as under.

$$\bar{Q}ROA = -0.016 + 0.152 FCF + 0.321 FSIZ - 0.510 AGE + €$$

Tobin'Q, FCF, and Firm Attributes (FS & FA)

Table 4.8 depicts that constant is significant (positive), shown by the beta coefficient of 0.57, p-value 0.000. Findings have shown that FS and FA shows statistically significant negative moderating impact among free cash flows (FCF) and FP (Tobin's Q). The findings have shown that firm age' coefficient = -0.628 and p-values = 0.0008 having significant of 5%, whereas Firm Size' = 0.377 and p-value = 0.0000. In general, negative impact is due to firm age. Findings reveal that the impact of firm attributes (FS & FA) explains 54% variations in the firm performance (Tobin's Q) with the linkage among FCF and FP (Tobin Q). Whereas the 46% variations are due to other factors that are not considered in our study. Therefore, we have disallowed the null hypothesis as here exists a moderating effect of firm attributes on firm's performance of the non-financial firms listed at PSX.

Table 4.8 Results of Regression Analysis (Tobin Q)

Predictors	**Financial Performance (Tobin Q)**			
Variable	**B Coefficient**	**SE**	**T Stats**	**P Value**
C	0.57	0.3184	1.79	0.0000
FCF	0.08	0.0321	2.48	0.0000
FSIZE	0.377	0.1232	3.06	0.0000
FAGE	-0.628	0.3123	2.01	0.0008
R Square	0.54			
Adjusted R Square	0.52			
F Sats	20			
P Value	0.0000			

The above model shows the following:

$$\bar{Q}it\ Tobin's\ Q\ = 0.57 + 0.08\ FCF - 0.628FAGE + 0.377FSIZ + €$$

This study is based on two hypotheses. In the first hypothesis, we hypothesized that FCFs put a significant positive impact on financial performance that was found significant and validated our hypothesis. The performance of firms can be increased by the presence of free cash flows which is contrary to the agency theory (Jensen, 1986) and consistent with the findings of (Wang, 2010) (A Gregory, 2005), and ((Mutende et al., 2017). The second hypothesis of our study is that the attributes of the firm (FS) and (FA) put a substantial moderating impact on the linkage among free cash flows (FCF) and FP (ROA, Tobin's Q). The study found that firm attributes show a statistically significant negative moderating impact on the linkage between FCF and FP (ROA). Firm Age has shown a negative significant impact, whereas Firm size has shown a positive significant impact. Therefore, we can conclude the overall negative effect based on our results is attributed to the greater negative effect of firm age on firm size. Findings by (Pervan, 2017) also showed that firm age adversely impacted financial performance. Firm size is an important attribute of the firm. It is mainly dependent on the assets and sales generation of the firm. The findings of the various empirical studies are in alignment with our findings. Those studies include Babalola (2013); Dogan, (2013); Gupta (1969); Serrasqueiro (2008); Shubita (2012); and Vijayakumar (2010).

Conclusion, Limitations and Policy Implications

Conclusion of the study

This study reveals that financial performance of the firm and its free cash flows (FCF) are positively related. However, the attributes of firm have a negative remarkable moderating impact. Results revealed that companies listed on PSX have operative command that allowed the managers to make prudently the investment decisions, leading towards the increase of wealth of shareholders. Finally, company traits showed

bad moderating effects on the linkage among FCF of the firm and its performance. Firm Age poses greater negative impact whereas firm size has shown positive impact. The greater negative impact is attributed towards the age of the firm.

Limitations of the Study

This study is based on the hypotheses of Free Cash Flows (FCF). For the proper allocation of free cash flows (FCF) resources of an organization, the directors keep a check and balance on the decision-makers of the organization. The results of this study are in favor of this view and suggest that with the effective control mechanism the performance of firms can be increased. However, a possible restraint of this study is that it does not replace directors' opinions, as they can also persuade management actions by playing the role of advisor. The population sample used for this study was chosen from PSX; therefore, our conclusions were entirely limited to Pak**is**tan. The third limitation of this study is that our finding regarding the attributes of the firm is entirely based on firm size and firm age, by the combination of other factors such as sales growth, the pattern of payouts, liquidity and leverage the results can be different.

Policy Implications

This study recommended that PSX companies should keep a handsome amount of free cash in an organization which will contribute towards the betterment of their performance so the key decision-makers should make efforts to increase the amount of free cash in the organization. This study recommends that the management, investors, Board of Directors, and other key personnel, should focus on the generation of more amount of free cash that can help in the growth of the business also. If the firm does not have good investment opportunities available, this free cash can be used to make payments of dividends to shareholders. Whereas the control of free cash is also an important issue for the organizations. To enhance the performance of the firm, therefore, the reasonable cash flow in any business is an efficient strategy to increase the overall performance of firms. Research shows that strong factors (company age) play a major negative role between free cash flow links and strong financial performance, prompting firm policy makers to review existing processes and build new ones in old firms so that they can adjust to the new environment to reap the benefits.

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