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## Article

# Impact of dividend policy on shareholders wealth and firm performance in Pakistan

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## BANKING & FINANCE | RESEARCH ARTICLE

# Impact of dividend policy on shareholders wealth and firm performance in Pakistan

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**Abstract:** In the field of corporate finance the question as to whether dividend policy affects the shareholders wealth still remains unresolved. The objective of this research paper is to establish the impact of dividend policy on shareholders' wealth and firm performance in Pakistan. The conduct of dividend policy has been one of the most debatable issues in literature of corporate finance. Numerous researchers have attempted to reveal issues with respect to the dividend policy, however, we still don't have a worthy explanation regarding the behavior of dividend policy. The variables used in this research are dividend policy, shareholders wealth, and firm performance. Dividend per share and dividend yield are used to measure dividend policy. For shareholders wealth, earning per share and share price are used as proxies. Return on equity is used to measure firm performance. From the regression result, it is found out that dividend policy has positively significant impact on shareholders' wealth and firm performance. This study supported dividend relevance theory, signaling effect theory, bird in hand theory and clientele-effect theory. The study commends the implementation of stable, effective, managed and target-oriented dividend policy by firm's financial managers along with effective supervisory framework governed by capital market regulatory bodies to uplift firms' performance and shareholders wealth in Pakistan. Furthermore, appropriate firm disclosure with respect to dividend payout and dividend per share is needed to guard the potential investors in making the right investment choices in listed firms.

**Subjects:** Economics; Finance; Business, Management and Accounting

**Keywords:** dividend policy; shareholders wealth; firms performance; earning per share; share price; returns on equity

### ABOUT THE AUTHORS

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### PUBLIC INTEREST STATEMENT

Potential investors and Shareholders decide to invest in a company by investigating its capacity of paying dividends. Additionally, dividend policy can be utilized by firm management and shareholders to minimize agency costs. Keeping in view that the ultimate objective of a firm is to maximize its shareholder's wealth, its management prosperity can also be determined by the wealth of its shareholders. To guarantee success, management needs to completely comprehend dividend policy. In spite of the fact that dividend policy is imperative to all firms, less research has been conducted to study the effect of dividend policy on shareholders wealth and firm performance of firms working in Pakistan. Through this research, an endeavor is made to examine dividend policies of firms listed in Pakistan Stock Exchange (PSX).

## 1. Introduction

In Pakistani economy, privatization, liberalization, and globalization together with rapid strides of information technology, have acquired serious rivalry in all fields of business. This has made Pakistani firms confused, apprehensive, dazed, and anxious. To survive the competition, firms need to increase their value. Finance managers have to settle on basic business and budgetary choices that will meet their goal of expanding shareholders' wealth and firm's value. Hence, profit assumes an imperative position.

Profit being the main economic drive for firms, can be attributed to two main destinations: it can be held in the firm to be used for its future growth, or can be distributed to shareholders. This distribution can be done in the form of dividends or through repurchasing circulating shares. Thus, firms need to create a dividend policy in order to determine whether or not to pay dividends and how.

Various researches have attempted to study dividend policy. Notwithstanding these studies, the issue of what settles on corporate dividend policy is still uncertain. Dividend policy is essential for an organization as it symbolizes the strength and gives information about an organization's prospect of development (Black, 1976). Potential investors and shareholders decide to invest in the company by investigating its capacity of paying dividends. Moreover, dividend policy can be utilized to minimize agency costs. Since management prosperity can be determined by the wealth of its shareholders, management needs to completely comprehend dividend policy. In spite of the fact that dividend policy is imperative to all firms, less research is conducted to check effect of dividend policies on shareholders' wealth and firm performance of firms in Pakistan. In this study, an endeavor is made to examine dividend policies of firms listed in Pakistan Stock Exchange (PSX).

### 1.1. Problem statement

The question as to whether dividend policy affects the shareholders wealth still remains unresolved. Its results vary significantly across different countries so researchers have a huge space to explore this issue in different countries. Previous studies have been conducted in some particular sectors and less developed countries like Pakistan have usually been ignored by researchers. Shareholders wealth and firm performance have special consideration in the mind of potential investor, so it is vital to study impact of the dividend policy on shareholders wealth and firm performance.

### 1.2. Research objectives

The objectives of this research are to explore the extent of association between dividend policy and share market price (shareholders wealth); between dividend policy and earning per share (shareholders wealth); and between dividend policy and firm performance (profitability).

## 2. Literature review

### 2.1. Theoretical background

#### 2.1.1. Dividend irrelevance theory

The dividend irrelevance theory, eminently recognized as Modigliani and Miller's hypothesis, was proposed by Modigliani and Miller (1961). In their paper, MM theorized that dividend policy has no impact on stock price and cost of capital, resultantly the dividend policy of a firm becomes trivial for shareholders wealth. The results proposed by Pilotte (1992) suggested that firms that distribute more dividends, usually exhibit less appreciation in stock price. According to MM hypothesis, the sum total of dividends and capital gains is same regardless of whether the firm distributes more or retains more in order to receive stock returns via capital gains. Therefore, the investor becomes indifferent. Even when the dividends are not up to investor's expectations, however, investors have an option to sell some portion of their stock to obtain cash, and vice versa.

### 2.1.2. Dividend relevance theory

There are two dividend relevance theories by Walter (1963) and Gordon (1962, 1963), which show that firms which pay dividend to their shareholders, are considered positively and bear a good image in their minds. If companies don't pay dividend then it increases the uncertainty in the eyes of investors and the payment of dividend increases the share price of firms.

### 2.1.3. Bird-in-hand theory

Lintner (1956) and Gordon (1959) developed this theory which proposes that investor is always risk-avoider and desires to obtain dividend instead of capital gains in future. So dividend payments have a great impact on market price of share. While making investment decisions, investors monitor the firm dividend policy and compare dividends with capital gains. This theory advocates that a bird in hand is usually better than the bird in bush. Here, bird in the hand is considered as dividend, whereas bird in bush is assumed to be capital gain. Thus, it is better to receive an income right now instead of waiting for future gain with some degree of risk involved in it. On the other hand, dividends are not as much risky as capital gains.

### 2.1.4. Clientele effect

Clientele effect highlights another aspect of relevance theory. It suggests that due to the changes in dividend policies, firm's share price also reacts to changes in dividend policies. Accordingly, investor takes decision on the basis of firm's dividend policies. Whenever firms change their dividend policies, investors make their investment decisions accordingly (Black & Scholes, 1974; Elton & Gruber, 1970; Miller & Modigliani, 1961). Shareholders and investors purchase the shares of those firms whose dividend policy satisfy their needs.

### 2.1.5. Agency theory/free cash flow theory

Many researchers (Ong, Lim, Lim, Ow, & Tan, 2014) discussed this theory in their researches. This theory has focused on conflict of interest between management and shareholders. The main task of manager is to enhance the wealth of shareholders and manage the business properly. The agency issues occurs when there is an excess cash flow in the organization and they have to invest in profitable projects but they utilize the cash in their own interest instead of shareholders. So shareholders have to keep an eye on managers. And the cost that arises on monitoring of managers is agency cost. Dividend is important in minimizing the agency cost.

### 2.1.6. Signaling effect

On the basis of Miller and Modigliani (1961) theories, many scholars concluded that dividends are having a signaling effect. Investor or potential investor forecasts the profit of the company, which in fact is influenced by the rate of dividend. Firms have to distribute dividends among investors or shareholders. High dividend payments are considered positive sign of profitability by shareholders. According to Chaabouni (2017) dividends are having a signaling effect as dividend payment gives the information about company to the market. In actual they give signal to market. As the company's dividend has been announced, it increases the firm share prices. On the basis of dividend announcements, investors, shareholders, and potential investors predict the position of company in context of profitability. When there is an increase in dividend payments, it is a good sign for company, it increases its goodwill and its reputation in the mind of customer and share price increases (Al-Hasan, Asaduzzaman, & Karim, 2013). On the other hand, when companies cut their dividend payments, it has a negative effect on the company's reputation as it gives negative signal about the company to its shareholders and it reduces the share price.

## 2.2. Empirical studies

Different scholars have explored the relationship among various determinants of dividend policy and its association with return on equity, share price and earning per share. Some have studied the effect of macroeconomic factors on dividend policy, whereas some have investigated the impact of firm specific factors on dividend policy. Others have also studied the consequences of dividend policy

individually in different countries and industries. Many of the research scholars use dividend payout ratio and dividend per share as a proxy of dividend policy and find its impact on different variables.

### **2.3. International evidence**

One of the studies has been conducted by Iminza (1997) on information content of dividend payments and its impact on prices of shares of public listed firms. According to the findings of this study, dividend payments have a positively significant effect on the prices of shares. It also concluded that when there is a sharp decrease in the dividend payments, it had a great impact on share prices. It means share prices depend on the changes in dividend policy. Many of the studies found that changes in dividend plays an important role in share prices, company performance, and stock returns (Asquith and Mullins, 1983; Pettit, 1972). Rigar and Mansouri (2003) studied the association between performance of firm and dividend policy. They found a positive relationship between both variables. Tiriongo (2004) did a research on dividend policy and took the firms listed on NYSE as sample. His findings suggested that there is positive linkage between dividend policy and firm performance. Malombe (2011) performed a research on effect of dividend policy on firm's performance in Kenya. He concluded that there is positive but insignificant association between profitability and dividend policy in Kenya.

According to "information content of dividends hypothesis" MM (1961), changes in dividend improve the stock returns as they provide the information about the company's future profitability. But many of the studies did not support this hypothesis e.g. DeAngelo, DeAngelo, and Skinner (1996). Nissim and Ziv (2001) analyzed the association between changes in a dividend policy and changes in firm's performance in terms of profitability. Their study gives the strong indication that both variables are positively related with each other. Kioko (2006) identified the relation between dividend policy and performance of the firm. He found that there is a positive linkage between changes in dividend and future profitability. Kioko (2011) further studied these variables and found positive impact of both on each other. Ouma (2012) also found the same results. Adediran and Alade (2013) conducted another study and explored the associations between the dividend policy and return on equity and return on asset of the firms listed on NYSE. According to their study, both are positively related to each other. Mokaya, Nyangara, and James (2013) found positive association of dividend policy and shareholders wealth. Anandasayanan and Thirunavukkarasu (2016) conducted a research on dividend policy and corporate profitability. They found positive association of both variables. Osamwonyi and Lola-Ebueku (2016) conducted a study on dividend policy and firm's earning and found negative association of variables. Ozuomba, Anichebe, and Okoye (2016) explored the effect of dividend policies on wealth maximization and found significant relationship among variables. Shah and Mehta (2016) tested a relationship between dividend payments and share prices and found positive relationship between both variables. Widyastuti (2016) conducted a study to investigate the influence of dividend policy on firms value and showed positive relationship between both variables. Chaabouni (2017) researched the impact of dividend announcement on stock return and found a positive relationship among variables. Swarnalatha and Babu (2017) also found the positive association between dividend policy and share prices.

### **2.4. Local evidence**

Nishat and Irfan (2004) conducted a study in Pakistan and found positive association between dividend policy and shareholders wealth. Nazir, Nawaz, Anwar, and Ahmed (2010) found the impact of dividend policy on stock price volatility in Pakistani market. He applied fixed effect model and random effect model to panel data by selecting a sample size of 73 firms listed on the KSE from the period of 2003–2008. Findings of their research showed a positive relation between both variables. Asghar, Shah, Hamid, and Suleman (2011) in another study evaluate the influence of dividend payouts on stock prices. They used nonfinancial companies from five sectors (cement, synthetic fibers, sugar, chemicals, and engineering) by taking data from 2005 to 2009. Their findings showed that dividend payout ratio and dividend yield are positively and significantly correlated with share price.

Another study has been conducted by Khan (2012) to determine the impact of dividend policy on share prices of pharmaceutical and chemical companies of Pakistan. She analyzed that return on equity, retention ratio, and cash dividend have significantly positive association with stock market prices. She also presented that earning per share and dividends exhibit insignificantly negative association with share prices.

Khan, Zulfiqar, and Shah (2012) conducted a study to determine the impact of earnings on profitability and returns and found the weak positive relationship between both variables. Salman (2013) conducted a research on dividend policy to check its influence on shareholders' wealth in Pakistani sugar industry. His findings showed the positive linkage between explanatory and dependent variable.

Ullah et al., (2015) conducted a research to analyze influence of dividend policy on changes in share price. They selected a sample of companies listed in KSE on the basis of their market capitalization. Their findings suggested that dividend policy has no influence on volatility of stock prices in Pakistan.

Another study has been conducted by Hasan, Ahmad, Rafiq, and Rehman (2015) to check an association between dividend policy and earning per share in textile and energy sectors of Pakistan. The results of logarithmic regression showed that irrespective of industry, there is a negative impact of dividend payout ratio on firm earnings. A recent study (Rizwan, Khan, Nadeem, & Abbas, 2016) has been conducted on companies listed in Pakistan stock exchange. Their findings suggested that dividend policy has no impact on return on equity. Another study conducted by Tahir, Sohail, Qayyam, and Mumtaz (2016) tested the effect of dividend policy on firm performance and concluded that there is positively significant association between performance of firm and their respective dividend payout policy.

On the basis of above reviewed literature, following hypotheses have been developed.

*H0: There is no significant association between dividend policy and market price of share (shareholders wealth).*

*H1: There is a significant association between dividend policy and market price of share (shareholders wealth).*

*H0: There is no significant association between dividend policy and return on equity (firm performance).*

*H1: There is a significant association between dividend policy and return on equity (firm performance).*

*H0: There is no significant association between dividend policy and earning per share (shareholders wealth).*

*H1: There is a significant association between dividend policy and earning per share (shareholders wealth).*

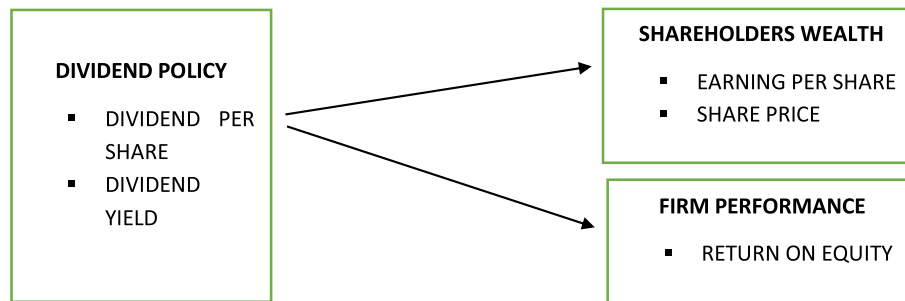
### **3. Research methodology**

#### **3.1. Data collection and sampling**

A sample of 51 firms listed in Pakistan stock exchange has been selected by including the firms which have been paying dividends for 10 years consecutively or with the gap of 1 or 2 years at maximum and are following stable dividend policies. Since the purpose of this research is to study the impact of dividend policy on shareholders' wealth and firm performance, that's why only the dividend paying companies have been selected. Companies depicting non-consecutive dividend payouts have not

been selected in the sample. Top 51 firms from PSX were selected as these companies have capacity to pay dividends due to their consistent positive returns. This study covered the time period of 2006–2015. Data have been taken on annual basis. Total number of observations in this study were 510. To minimize the survivorship bias, those companies have also been selected which were paying dividend with the gap of 1 or 2 years along with the companies which were paying dividend on regular basis. This research applied multiple regression using E-Views for a period of 10 years from 2006 to 2015.

### 3.2. Research model



To find the association between dividend policy, shareholders wealth, and performance of the firm, the following models have been developed:

$$d(SP)_{i,t} = \beta_0 + \beta_1 d(DPS)_{i,t} + \beta_2 DY_{i,t} + e_{i,t}$$

In this model, share price is the dependent variable which is used to measure shareholders wealth; and dividend policy is used as independent variable. Two proxies (dividend per share and dividend yield) are used to measure dividend policy.

$$EPS_{i,t} = \beta_0 + \beta_1 d(DPS)_{i,t} + \beta_2 DY_{i,t} + e_{i,t}$$

In this model, earning per share is the dependent variable which is used to measure shareholders wealth; and dividend per share and dividend yield are used to measure dividend policy.

$$d(ROE)_{i,t} = \beta_0 + \beta_1 d(DPS)_{i,t} + \beta_2 DY_{i,t} + e_{i,t}$$

In this model, return on equity is the dependent variable which is used to measure firm performance; and dividend per share and dividend yield are used to measure dividend policy.

### 3.3. Descriptive statistics

Table 1 presents the summary of descriptive statistics. For earning per share, the mean value and its standard deviation in firms listed in PSX are 34.83800 and 0.04131. These two values demonstrate the panel data dispersion. The findings of mean value and standard deviation imply there is dispersion of earning per share in the sample firms. For return on equity, the mean value and its standard deviation in firms are 0.277880 and 0.099995. These results show that mean is somehow similar but there is a difference between standard deviation. For share price, the mean value and its standard

**Table 1. Descriptive statistic**

	Mean	Median	Maximum	Minimum	Std. dev.
EPS	34.83800	33.52500	328.8000	6.170000	0.041310
ROE	0.277880	0.293000	0.454000	0.084300	0.099995
SP	31.42900	31.69000	470.0000	20.20000	0.020860
DY	0.039746	0.028333	0.110032	0.015606	0.026811
DPS	4.550000	4.450000	475.0000	0.000000	0.156586

**Table 2. Correlation analysis**

	EPS	ROE	SP	DY	DPS
EPS	1.000000				
ROE	0.006698	1.000000			
SP	-0.159879	0.227322	1.000000		
DY	0.098678	0.479216	0.442407	1.000000	
DPS	-0.024484	0.344938	0.137214	-0.293427	1.000000

deviation are 31.42900 and 0.02086, whereas the median is 31.69000. For dividend per share, mean value, median, and its standard deviation are 4.550000, 4.450000, and 0.156586, respectively. However, the highest value for the dividend per share is 475 per share and the lowest value recorded is 0. It shows 0 when company is not paying dividend. Mean, median, and standard deviation of dividend yield are 0.039746, 0.028333, and 0.02681, respectively.

Table 2 shows correlation coefficients of variables of the study. The value of correlation coefficient between two independent variables is -29.34% and thus exhibits that there is no problem of multicollinearity in the model.

### 3.4. Model selection

In order to select the appropriate model, redundant fixed effect test has been applied to finalize the suitable model between common constant model and fixed effect model. The selection of the appropriate model (common constant or fixed effect) depends on the acceptance or rejection of null hypothesis of redundant fixed effect test. If null hypothesis of the redundant fixed effect test is not accepted then it is determined that fixed effect model is appropriate model. Whereas on acceptance of null hypothesis of redundant fixed effect test, we further apply another test named Breusch-Pagan test. The Breusch-Pagan test then decides the appropriate model between common constant and random effect model. Rejection of its null hypothesis suggested that random effect model is a suitable model but if the Breusch-pagen test also endorsed the common constant model then the final available option is common constant model. In this study, redundant fixed effect test and then Breusch-Pagan test have been applied on the panel data; and the acceptance of null hypothesis of both redundant fixed effect test and Breusch-pagen test indicate that common constant model is appropriate to explain the relationship between the proposed variables under consideration.

As indicated in Table 3, the probability value shows the acceptance of null hypothesis of both redundant fixed effect test and Breusch-pagen test. It indicates that common constant model is appropriate to explain the relationship between the three proposed models.

### 3.5. Common constant model

Common constant model interrogates the relationship between predictors and the explained variables without an entity. In common constant model, all individuals have a common slope, but different intercepts. The basic purpose of the fixed effect model is to segregate the individual effect. The results of common constant model are shown in Tables 4a, 4b and 4c.

The above table shows the results of regression for price per share. It demonstrates that for each unit increase in dividend per share, the share price will increase by 0.04 unit. Whereas for each unit increase in dividend yield, the share price will increase by 0.69 units.

**Table 3. Probability values**

Tests	Relations	Prob.	Status
Redundant fixed effect/F-test	DP-SP	1.000	Common constant model
Redundant fixed effect/F-test	DP-EPS	1.000	Common constant model
Redundant fixed effect/F-test	DP-ROE	1.000	Common constant model



**Table 4a. Dependent variable d(SP)\***

Variable	Coefficient	Std. error	t-statistic	Prob.
C	0.128673	0.069942	1.839717	0.0000
d(DPS)	0.041542	0.019411	2.140121	0.0328
DY	0.695218	0.131486	5.287286	0.0000

\*Unit root test suggested first difference for share price variable.

**Table 4b. Dependent variable EPS\***

Variable	Coefficient	Std. error	t-statistic	Prob.
C	-0.119922	0.045735	-2.622093	0.0090
d(DPS)	0.184626	0.012693	14.54548	0.0000
DY	0.264393	0.085979	3.075083	0.0022

\*Unit root test suggested level for earning per share.

**Table 4c. Dependent variable d(ROE)\***

Variable	Coefficient	Std. error	t-statistic	Prob.
C	-0.004775	0.006536	-0.730640	0.4654
d(DPS)	0.006120	0.001814	3.373799	0.0008
DY	0.104942	0.012287	8.540796	0.0000

\*Unit root test suggested first difference for return on equity.

Table 4b shows the results of regression for price per share. It illustrates that for each unit increase in dividend per share, the earning per share will increase by 0.18 unit. Whereas for each unit increase in dividend yield, the earning per share will increase by 0.26 unit.

Table 4c exhibits that one unit increase in dividend per share brings 0.006 unit increase in return on equity whereas one unit increase in dividend yield will increase return on equity by 0.104 units. So Tables 4a, 4b, and 4c show the results of regression and indicate the relationship among dependent and independent variables. All the relationships are positive.

### 3.6. Interpretation of regression results

On the basis of redundant fixed effect test, we decided that common constant model is an appropriate model. We came to know from the probability of redundant fixed effect test which is 1 in all three equations. It means we have to accept null hypothesis which shows common constant method is more appropriate. So, we estimate regression with common constant effect model to measure the influence of dividend policy on firm performance and shareholders wealth for companies listed on PSX index for the period 2006–2015.

The results report that there is a significantly positive relationship between return on equity and dividend policy ( $DY-\beta = 0.104$ ,  $p = 0.00$ ;  $DPS-\beta = 0.006$ ,  $p = 0.00$ ). Dividend per share and dividend yield are significant at 5% level of significance. It means that increase in dividend payment has a positive impact on firm performance. But many of the studies show significantly negative relationship between dividend payout and firm profitability. The negative relation means that when companies pay dividend, it affects the retained earning which reduces the firms internal earnings. The results report that there is a positive association between share price and the dividend policy ( $DY-\beta = 0.69$ ,  $p = 0.00$ ;  $DPS-\beta = 0.041$ ,  $p = 0.03$ ) that means there is a positive relationship between dividend policy and shareholders wealth. Dividend policy has a positive impact on share price because investor came to know about the positive image of company as well as a firm can increase its funds by issuing new shares. Resultantly, profits of companies increase and this leads to the increase in

**Table 5. Combined results of three models**

	<b>d(SP)</b>	<b>EPS</b>	<b>d(ROE)</b>
$R^2$	0.057796	0.328869	0.138045
Adjusted $R^2$	0.053663	0.325925	0.134264
F-statistic	13.98579	111.7249	36.51483
Prob(F-statistic)	0.000001	0.000000	0.000000

price of shares. Results also show that there is a positive relationship between earning per share and the dividend policy ( $DY-\beta = 0.26$ ,  $p = 0.005$ ;  $DPS-\beta = 0.18$ ,  $p = 0.000$ ). It means when dividends payment increases, it upsurges the shareholders wealth (EPS). Thus, companies should pay dividend if they want to increase shareholders wealth.

Table 5 shows the adjusted  $R^2$  and F-Statistics. The value of adjusted  $R^2$  is 0.325 which means that the proposed model accounted for 32.80% of variance in earning per share is due to dividend payment policy of firm. Thus, 32% variation in earning per share is explained by these explanatory variables in the model. The F statistics of this model is significant at 5% level significance and it means that this model is fit to explain dividend policy effects on earning per share. Second model accounted for 5.7% of variance in share price is due to dividend yield and dividend per share and its adjusted  $R^2$  is 0.0537. The F statistics of this model is significant at 5% level significance. Third model accounted for 13.8% of variance in return on equity due to dividend payment and its adjusted  $R^2$  is equal to 0.134. It means that approximately 14% variation in return on equity is explained by dividend yield and dividend per share. The F statistics of this model is significant at 5% level significance. Therefore, the regression results of all these models show positively significant result between firm's dividend policy and firm performance and shareholders wealth.

#### 4. Conclusion

The major objective of this research is to investigate the influence of dividend policy on firm's performance and shareholders' wealth. The total 51 companies from PSX index were sampled for the time period 2006–2015 by employing common constant effect model. Regression results state that dividend policy is positively linked with earning per share and share price. Moreover, dividend policy is also significantly positively associated with return on equity. Based on the result, these variables of shareholders wealth are consistent with the bird in hand theory, theory of free cash flow, and clientele effect theory. Results obtained for dividend policy are consistent with signaling effect theory.

##### 4.1. Practical implications and recommendations

This research recommends to design dividend policy on the basis of market psychology. Companies should be vigilant enough while paying dividends if they want to increase their share prices. Companies should adopt stable dividend policies because the company which pays stable dividends will have positive impact on shareholders wealth and firms value. If manager considers that dividend policy is vital to their investors and has positive effect on share price, they should embrace managed dividend policy rather than the residual one. The study commends the use of effective, stable, managed and target-oriented dividend policy by managers along with effective supervisory framework governed by capital market regulatory bodies to enrich firms' performance and shareholders wealth in Pakistan. Furthermore, appropriate firm disclosure with respect to dividend payout and dividend per share is needed to guard the investing public in making the right investment choices in listed firms.

##### 4.2. Limitations

This study is valuable and beneficial for the academicians, administrators, policy makers, speculators, investors, and potential investors. The scope of the study, however, is limited as it focuses only on firms listed in Pakistan Stock Exchange for time period of 2006–2015.

### 4.3. Future suggestions

Further researches can be conducted in particular sectors like banking sector, food producer sector, etc. This study includes dividend policy as an explanatory variables for analysis. Further researchers may use other explanatory variables or different proxies can be used to measure dividend policies, so that the result may become more interesting and broad spectrum. It is recommended to use some other dependent variables to measure firm performance. Some other profitability ratio like return on assets can be used as proxy. Similarly, the measurement of shareholders' wealth may be done using proxies like earnings before interest and tax (EBIT), economic value added (EVA), and market value added (MVA).

Moreover, time period of this study can also be increased. Additionally, the future research may use unbalanced panel data to obtain diversity in results. Future research ought to expand the research area across various economies and markets. Also, different estimations can be utilized to quantify shareholders' wealth and firm performance. The sample may further be grouped into sub-categories like financial organizations and non-financial companies, irregular dividend paying and regular dividend paying companies, etc.

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#### Correction

This article has been republished with minor changes. These changes do not impact the academic content of the article.

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