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## Article

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## ACCOUNTING, CORPORATE GOVERNANCE & BUSINESS ETHICS | RESEARCH ARTICLE

# Impact of ownership structure on dividend payout in Pakistani non-financial sector

Muzammal Ilyas Sindhu<sup>1</sup>, Shujahat Haider Hashmi<sup>2</sup> and Ehtasham Ul Haq<sup>3\*</sup>

**Abstract:** The purpose of this study is to analyze the impact of ownership structure on dividend payout (DIV) ratio of 100 companies related to non-financial sector listed in Karachi stock exchange for the sample period of 2011–2015. Fixed effects model as a panel data analysis technique indicates that managerial ownership (MO) has shown significant and negative impact on DIV which indicates that as MO rise, they will prefer to retain instead of distribution. Institutional ownership is showing significant and positive behavior with DIV ratio which also showing favorable arguments for dividend distribution. Change in earnings and operating cash flows as control variables are not making variation in DIV. Further, firms having favorable firm's value and higher firm's size lead to distribute more dividends with good faith and reputation. Leverage and DIV ratio relationship are an indication of cash flow theory, all earnings must be distributed among shareholders while positive and favorable NPV projects must be availed through debt financing. This study provides supports to shareholders in adjusting their investment strategies because it provides information regarding dividend policies.

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

**Keywords:** managerial ownership; institutional ownership; leverage; firm size; panel data analysis

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### PUBLIC INTEREST STATEMENT

Organizations generally have managerial personnel and shareholders who are considered as vital source for them, utilization of which in distinctive way could be a cause of more productivity. This research will enlighten that which type of ownership structure will be beneficial for organization and investors as well. The findings are applicable for managers, shareholders, institutional investors and regulatory bodies for understanding the role of ownership structure so that effective financial and investment decisions could be designed and implemented for the well-being of stakeholders and society at large. This study proposed that INST is much beneficial for those investors who prefer dividend instead of long-term capital gain. This study also supports shareholders in adjusting their investment strategies keeping in mind ownership type as well.

## 1. Introduction

Ownership structures has great importance in corporate governance because they affect the incentives of managers, and thereby the efficiency of firms. The ownership structure is defined by the distribution of equity with regard to votes and capital, but also by the identity of the equity owners. The ownership structure is considered to be as equity distribution with regard to voting power and the identity of the equity owners. The structure has major importance in corporate governance because it determines the incentives of managers and they manage by the economic efficiency of the corporations (Jensen & Meckling, 1976). Ownership structure has a significant impact on the significances established by the board, and these significances will decide the optimum arrangement of the board of directors (Desender, 2009). But dividends payout ratio in those firms is result of effective pressure of institutional ownership (INST) and is associated with higher dividends payments. Dividend payout (DIV) ratio reports the agency problems in between top level internal ownership and external shareholders. Insider's owner prefer to retain for usage of personal benefits and favorable NPV projects instead of distribution to shareholders, Moreover INST has a greater influence on the DIV ratio of the firms because of their majority ownership in the firms and voting rights in the management. Furthermore, earnings trend model has shown that there exist a significant and positive relationship between INST and DIV ratio (Short, Zhang, & Keasey, 2002).

Corporate governance is an instrument through which interests of shareholder are protected by managing corporate matters in such a way that they create value to shareholders. These mechanisms are affected by the distribution of equity of a company also known as ownership structure which motivates managers in their respective actions adding up to overall efficiency. Ownership structure not only entails the physical distribution of equity but also affects the control in an organization the level of concentration each shareholder has, where control refers to the ability of the board to take strategic decisions of an organization. Sound corporate governance mechanisms may have an influence on strategic decisions that include corporate events and financing decisions.

A split between ownership and control is pragmatic, as parties who own an organization do not manage its corporate matters as a result agency problems arise. The same conflicts of interests are also observed where ownership is concentrated to one party. Controlling shareholders using their decision powers can act in their own favors leaving the rights of minority shareholders unprotected. Agency theory thus links up with corporate governance and ownership structure that explains financing decisions taken by organizations. Pakistan is an emerging market where code of corporate governance was established by Securities and Exchange Commission of Pakistan in 2002, which is not so old. Like many other economies, family ownership is also witnessed in Pakistani economy. So due to late inception of these codes in the country and ownership concentration, the real sense in practice of corporate mechanisms is still doubted and hence the impact of ownership structure on DIV ratio of companies is yet to be explored.

It is challenging for directors and financial managers to decide whether the amount earned by the company either distributed to shareholders or retained to the company. Dividend payment is necessary for both managerial personnel and investors equally, as managers have to decide about the amount and timing and investors have to decide for making decision on their investment portfolio. Dividends are important for both investors and firms in different contexts; it is as income for investors as well as indicator of company performance. Managers also need to make an idea to return back reward, as a share of earnings on their investments without damaging company's smooth profitable position. However, company has to bear opportunity cost because it declines opportunities for company to invest in new favorable projects. Here one dilemma does not come to final solution that either distribution of dividend essentially raises shareholder wealth or not. Investors scrutinize experienced managers who must eligible for a better usage of the invested assets. On the other hand managers try to use their experience for taking investing and financing decisions. The aim of organization is to maximize the value of shareholder's wealth which basically represents ownership in organization. The purpose of this study is to investigate the impact of managerial and INST on DIV ratio of firms.

The DIV ratio is the amount of dividends paid to stockholders relative to the amount of total net income of a company. The amount that is not paid out in dividends to stockholders is held by the company for growth. DIV ratio will help in reducing the agency problems as well as it will also treat as a signal to give evidence to the stockholders about the firm's estimation. The DIV ratio can be influenced by the firm ownership structures. The focus of our study is to investigate the impact of ownership structure on the DIV ratio. Ownership structure is very important and influential factor in determining the efficiency of the market by giving information about two significant things. First, it will show the extent of risk diversification of shareholders. Second, it will give information about the possible agency problems in the management of the corporation. They further found that there exists a significant relationship between DIV ratio and ownership structure. The firm's control structure influences the DIV policy and that large and leading shareholders in a control structure may generate private benefits that they do not prefer to share these benefits with the minority shareholders. There are different shareholder types, but the institutional shareholders and the managerial shareholders have a greater control over the firm's policies as compared to other types. This study provides benefits to shareholders because they can attain benefit in adjusting their investment strategies. They can attain information regarding DIV ratio of organization designed by managerial owned, public, and private firms with respect to its ownership. Finally they can invest in such like firms which are providing more short-term benefits or capital gains with respect to investor's perspective.

## 2. Literature review

Ownership structure and corporate governance, due to conflicts of interest, are linked to agency problems. DIV ratio has been the subject of research for long with researchers carrying out studies on different aspects of the issue. An extensive work on corporate governance and ownership structure of companies has been done and its impact on different events, decisions, and performance of firms has been seen. As board of directors takes several crucial decisions regarding expansion, DIV, mergers, acquisition, investment, and other corporate events. In these decisions, controlling shareholders and other owners may also have their influence. Al-Najjar and Kilincarslan (2016) results show that foreign and state ownership are associated with a less likelihood of paying dividends, while other ownership variables (family involvement, domestic financial institutions and minority shareholders) are insignificant in affecting the probability of paying dividends. However, all the ownership variables have a significantly negative impact on DIV ratio and dividend yield. Thanatawee (2013) concluded that those firms tend to pay more dividend having largest part in INST as compared to other ownerships while it contradicts with implementation of this study on Chinese firms because they tend to pay less dividend having more INST as compared to government and largest shareholders owned firms.

Many studies have reported that managers being the agents of the owners of a company prefer to announce dividends that they are not penalized by the principal shareholders (Fluck, 1998) were among one of the first ones to study the role played by ownership mix in choosing internal financing when taking a decision about any investment by a firm. Many studies have also focused on the importance of largest shareholder in the company, the family influence and their overall impact on the company (Changjiang & Xianhua, 2005; Connelly, Hoskisson, Tihanyi, & Certo, 2010; Dai, 2007). Financing decisions in this regard were given ample importance with respect to the mix of a company, more emphasis were given on the dividend policy of a firm significantly affected by the ownership structure of the firm (Gugler & Yurtoglu, 2003). However, capital structure decisions also receive abundant attention, as its relationship with ownership structure was the hub of many studies. A positive relationship between ownership structure of a company and capital structure decisions was argued by (Lubatkin & Chatterjee, 1994).

Wiwattanakantang (1999) investigated the determinants of capital structure and revealed that not only profitability, tangibility, taxes and growth affect financing decisions of a firm, but ownership

structure is also very important in countries where firms are mostly family owned. This study found that family-owned firms have high debt levels to protect their powers. Romano, Tanewski, and Smyrnios (2000) investigated the effect of ownership structure on financing decisions and concluded that the financing decisions are multidimensional which may include social, behavioral, and other factors in small and medium enterprises.

Dhanani (2005) explored factors effecting corporate dividend policy of British firms using size, stock exchange, industry, gearing ratio, growth opportunities, asymmetry of information, profitability, private ownership, INST and managerial ownership (MO) as the key variables. The study found out that all the variables do have an effect on the DIV decisions of a firm. Moon and Tandon (2007) explored the relationship between ownership structure and capital structure was significant. Moreover, it was reported that level of leverage is highly correlated to MO and inversely to INST. Managers tend to use more debt financing but if institutional investors have holding then they can prevent the company for going toward more leverage level to reduce agency costs. Driffield, Mahambare, and Pal (2007) considering the emerging importance of corporate governance, investigated the impact of controlling shareholders and ownership mix on different financing decisions of a firm and its valuation. Their study was based on financial decisions relating to capital structure and the relationship was stronger for family-owned firms and weaker for non-family firms. Family-owned firms prefer external financing that allows incentives to the managers which affect value of firm. Another researcher scrutinized the relationship between ownership and financial policy and reported that there was no relationship of institutional shareholders with DIV and Jordan firms do not prefer external financing. A strong negative relationship between capital and ownership structure was reported. The study also found that institutional shareholders through proper monitoring help to reduce agency cost by preferring internal financing.

Short et al. (2002) indicated that results consistently produce strong support for the hypothesis that a positive association exists between DIV policy and INST. Furthermore, the results for an earnings trend model suggest a positive earnings trend component to the association between INST and the DIV ratio. Desender (2009) explored that MO structure has an important significant negative impact of dividends being declared by the firms. Moreover, the study concluded that INST has an important influence on the priorities set by the board of directors regarding the dividends. Mahadwartha (2003) observed the negative relationship of the dividend policy and leverage policy to the MO in his study. Fenn and Liang (2001) investigated the relationship in between dividend policy of organization and managerial share incentives. They concluded that managerial share ownership has significant and positive relationship with higher dividend firms facing more agency costs while on the other hand they find that firms with less MO have less opportunities and high free cash flow. Furthermore, they examined that managerial-shared ownerships have important role in determination of dividend policy. Overall they found that there exist negative relationship in between MO and dividends. Some researchers argued that DIV policy is positively associated with the INST while considering their tax-based hypothesis of study.

According to Adelegan (2003) the growth, capital structure, firm's size, and economic policy fluctuations have significant impact on cash flows and dividend changes. In prior studies, Lintner (1956) has confined that current and past earnings are as determinants of dividend changes. It is also argued that management of corporation decides dividend changes on basis of current earnings and predetermined payout rate. Miller and Modigliani (1961) irrelevance theory forms the foundation of modern corporate finance theory. MM Model argued that dividend policy is irrelevant for the cost of capital and the value of firm in the world without taxes transaction cost. They showed that when investors can create an income pattern by selling and buying shares, the expected return required to make them to hold firm's shares will be irrelevant to the way the firm packages its dividend payments and new issues of shares. Since the firm's assets, investment opportunities, expected future net cash flows and cost of capital are not affected by the choices of dividend policy, its market value

is unaffected by any change in the firm's payment pattern. Thus, dividend policy is irrelevant and firm can choose any payout pattern without affecting their value. MM theory implies that dividend payment will vary as a by-product of the firm's investing and financing decisions. This will not exhibit an organized pattern over time. MM argued that the firm's value is determined only by its basic earning power and its business risk.

Lintner (1956) in his studies, he has discussed corporate dividend policy. His findings indicate dividend acts as a primary and active source about decision-makings under multiple situations. His investigation about dividend policy stresses that when firm's management believes that dividend distribution will lead to positive change in earnings permanently, will increase in dividend distribution. Gordon (1963) provides counter point to Modigliani and Miller dividend irrelevance theory. He introduced a model to explain dividend price ratio. He concluded that investors are generally risk averse; they prefer cash dividend payment now in order to minimize the uncertainty and also prefer the certainty of dividend payments to the future capital gains. Black and Scholes (1974) examined the impact of dividend payment on share price and returns. Their findings show no relation to stock prices and returns. They stated that prices may change for the movement in reply to variation in dividend; the change may show something about the possible future way of income. They further explain that the change in stock prices may for short movement and after short time this change will disappear. They also suggested that dividend policy has no permanent effect on stock prices but it is choice of investors to take high or low payout on stocks, profit remains same either keep low yielding securities or high yielding securities.

Joshi (2012) wants to analyze effect of dividend and retained earnings on stock prices in banking and non-banking sectors of Nepal for fiscal year 2010–2011. Sample of companies was limited to 163, out of which 117 were relating to banking sector while 46 relate to non-banking sector. Analysis of his study indicates that dividends and retained earnings significantly explain the variations in share price in both banking and non-banking sectors. The impact of dividend, however, is much more prominent than that of the retained earnings. The relation of dividends and retained earnings on share price is positive in all cases. Bradford, Chen, and Zhu (2013) examined that with rise in firm's control will lead to reduction in dividend payment. Another finding in showing that those firms which are owned by and controlled by private persons will lead to less dividend payment while those firms which are state-owned are leading to paying more dividend than private-owned firms. The main logic for such like dividend policy is due to use of internal financing instead of debt financing and equity used from external resources. So, it is concluded that there exist a significant and negative relationship in between control chain and dividend distribution.

Thanatawee (2014) examined the effect of ownership structure upon dividend policies of Chinese firms listed on Shanghai Stock Exchange. He concluded that firms with higher ownership concentration, ownership by largest shareholders and government ownership have positive effect on dividend payout while institutional ownership have the negative effect on dividend payout ratio. It is concluded from above literature that there could be both types of expected relationships in between ownership structure and dividend policy measured by DIV ratio. INST is showing significant and negative behavior with dividend policy. MO is showing different type of behaviors. In some researches there exist significant and positive while in mostly places there is significant and negative impact of MO with dividend policies of organization. This study is specifically conducted in context of Pakistan with attaining sample of 100 non-financial companies listed in Karachi Stock Exchange (KSE) and sample selection is made by selecting top KSE 100 Index companies for sample period of recent five years. These firms are relating to approximately high level of capital. In this study, impact of ownership structure on dividend policy in context of Pakistan has been seen.

### 3. Data and methodology

This chapter presents the variables, data collection tools, and methodology used to measure the impact of ownership structure on DIV ratio in Pakistan. The sample size in this study consists of 100 firms out of which mostly issued dividend during the sample period i.e. 2011–2015. The sample consists of non-financial firms. Non-financial firms pertain to textile sector, cement sector, sugar sector, chemical sector, oil and gas sector, power distribution sector, engineering, and tobacco sectors. For the purpose of this study, data have been collected from KSE analysis reports, balance sheet analysis report of the state bank of Pakistan and from the individual firm websites. Annual reports are obtained from the official websites of companies and KSE website.

### 4. Variable description

Balance sheet method has been used to calculate the given variables from the actual financial statements. The amount of earning paid out in dividends to shareholders, it is the ratio of total dividends to total earnings, first I calculate dividend per share and earning per share and then divided dividend per share to earning per share for each year. Payout ratio is measured by dividing dividend per share by earning per share.

In our concerned study, the MO is meant to be the sum of proportion of managers, executives, and directors divided by the total capital shares of the firm. MO and DIV are relevant because it may help to reduce the conflicts of interests between the management and shareholders. INST refers to the sum of percentage of the banks, insurance companies, investment firms, pension funds, and other large-scale financial institutions out of total capital shares of the firm. INST is deemed to be playing the important role in the monitoring of the firm's management on account of their huge investments and expert financial knowledge.

The Tobin's Q ratio (Q) is used to check either firm value equals the total replacement cost of firm or not. It is calculated by dividing a firm's market value of shares by total value of assets. In our research, the change in earnings (CE) meant to calculate the variation in the earnings before interest, taxes, and depreciation. Bradley, Capozza, and Seguin (1998) observed in their study that change in the earnings of the firm is important and strong determining factor of the firm's debt. Thus change in earning can influence the decisions of capital structure of the firm and also the DIV ratio. Firm size (FS) is frequently used in accounting and finance research as a proxy for theoretical constructs or as a control variable to analyze its effect. In this research, total sales revenue has used as proxy for firm size. Here, proxy of the ratio of the book value of total debt to the book value of total assets for leverage (LEV).

Operating cash flow (OCF) is a cash flow available for capital provider, which is for reinvestment, after fulfilling all the requirement of the business, such cash flow which is extra or free is OCF. OCFs are calculated as operating income plus depreciation less tax paid by the firms (Sindhu, 2014). These data include both time series as well as cross-sectional data; hence it is a panel data.

$$DIV_{it} = \beta_0 + \beta_1 MO_{it} + \beta_2 INST_{it} + \beta_3 CE_{it} + \beta_4 Q_{it} + \beta_5 FS_{it} + \beta_6 LEV_{it} + \beta_7 OCF_{it} + \epsilon_{it}$$

### 5. Empirical findings

This chapter includes the results of descriptive statistics, correlation matrix-and regression analysis (Using panel data analysis). The descriptive statistics indicate mean, median, minimum, maximum values, standard deviation, Skewness, and kurtosis. Correlation matrix indicates the relationship between dependent, independent and control variables and also explains that problem of multicollinearity does not exist. Regression analysis explains the dependency of dependent variables on independent variables.

**Table 1. Descriptive statistics**

	DPO	INST	MO	CE	OCF	LEV	Q
Mean	0.294	36.72	0.364	7.963	21.51	1.851	14.81
Median	0.211	31.13	0.345	4.47	14.05	1.765	14.85
Maximum	0.818	95.43	0.546	25.07	45.73	3.62	15.75
Minimum	0.056	0.32	0.24	0.1	0.32	0.34	13.94
Std. dev.	0.227	27.43	0.11	8.309	17.79	1.079	0.757
Skewness	1.008	0.473	0.48	1.016	0.273	0.206	0.103
Kurtosis	3.01	2.116	1.826	2.728	1.402	1.878	1.303

Table 1 presents descriptive statistics about the variables of study. Results show that average DIV ratio in major non-financial sectors of Pakistani industry is 0.294. The mean value of DPO is 29.4% while standard deviation is 0.227 and it means that risk will be low along with high DIV. So investors should aware of this factor when investing in Pakistan and they can gain benefits from least risky firms. Furthermore, values of Skewness and kurtosis are indicating that data used about dividend policy in this research are showing normal behavior.

INST and MO as component of ownership structures are also showing medium behavior. Average values of INST and MO are 36.72 and 0.364, respectively. Here, values of Skewness and kurtosis are also showing normal behavior. Mean, maximum, and minimum values of leverage are 1.851, 3.62, and 0.34.

### 6. Correlation matrix

The correlation among the variables is reported in Table 2. DIV ratio has positive correlation with INST and negative correlation with MO as component of ownership structure and positive correlation with control variable like leverage, Tobin's Q.

There exists positive relationship in between change in earnings and OCFs as control variables with DIV ratio. Leverage is showing positive relationship with DIV which means increase in debt can lead to increase in dividend. According to cash flow theory, all earnings must be distributed among shareholders while positive and favorable NPV projects must be availed through debt financing. The explanatory variables are independent in nature, so problem of multicollinearity does not exist.

**Table 2. Correlation matrix**

	DPO	CE	OCF	INST	LEV	MO	Q
DPO	1.000						
CE	0.040	1.000					
OCF	0.072	0.104	1.000				
INST	0.003	0.061	-0.258	1.000			
LEV	0.091	0.091	0.054	-0.075	1.000		
MO	-0.041	-0.043	-0.032	0.040	-0.740	1.000	
Q	0.111	-0.321	0.090	-0.145	0.061	0.111	1.000



## 7. Regression analysis and discussion

Panel data analysis includes common effects model, fixed effects model, and random effects model. Two statistical tests are used to identify the most appropriate model. First method is used to compare the common effects model and fixed effects model.

### Redundant fixed effects tests

Effects test	Statistic	D.f.	Prob.
Cross-section $F$	8.5	-49,193.0	0.000
Cross-section $\chi^2$	286.8	49.0	0.000

Second method is used to compare the fixed effects model and random effects model and the Hausman test is used for their selection. If the model is well defined and if the individual effects are uncorrelated with the independent variables, the fixed and random effects cannot be different. Here value of  $\chi^2$  is checked, if it is significant then fixed effects model is used for further processing otherwise random effects model is considered best for regression.

### Random effects—Hausman test

Test summary	$\chi^2$ statistic	$\chi^2$ D.f.	Prob.
Cross-section random	31.1	7.0	0.032

Further the test of heteroscedasticity and auto correlation is performed, the p-value of both test is shown more the 5% that means there is no issue of heteroscedasticity and auto correlation.

### Heteroscedasticity test: White

F-statistic	3.37681	Prob.	0.0722
Obs* $R^2$	22.2461	Prob. $\chi^2$	0.0750

There is no issue of multicollinearity. There is possibility that a weak correlation between independent variables exists. In this study, we have investigated the impact of ownership structure on DIV ratio about non-financial sector of Pakistani's firms. For this purpose, panel data analysis technique has been used because data contain multiple years and cross sections of different firms relating to non-financial sectors like textile sector, cement sector, sugar sector, chemical sector, oil and gas sector, power distribution sector, engineering and tobacco sectors. There is no issue of multicollinearity, heteroscedasticity, and auto correlation because all of these have been removed using different statistical techniques (Table 3).

In regression analysis MO which has shown significant and negative relationship with DIV which indicates that with the rise in MO, managers will prefer to retain because they will attain more benefits from investing in projects and will purchase further assets for that organization. Coefficient of MO is 0.7 which has highest participation in determining the DIV ratio. INST is also showing significant and positive behavior with dividend policy; which also showing favorable arguments for dividend distribution. It means in context of Pakistan, if firms have INST that will also lead to distribute more and more dividend to its shareholders. Those managers which think that dividend relevance theory is true and in real world firm's value is affected by dividend distribution, those will formulate such like dividend policies which support firm's value. So in this study, theory of dividend relevance given by (Gordon, 1963; Lintner, 1956) can be supported.

**Table 3. Fixed effects model**

Variable	Coefficient	Std. error	T-statistic	Prob.
INST	0.004	0.001	2.672	0.008
MO	-0.700	0.334	-2.098	0.037
CE	0.001	0.003	0.278	0.781
OCF	0.071	0.062	1.151	0.251
FS	0.001	0.000	4.563	0.000
LEV	0.059	0.026	2.234	0.026
Q	0.208	0.056	3.706	0.000
$R^2$	0.711			
Adjusted $R^2$	0.627			
F-statistic	8.474			
Prob. (F-statistic)	0.000		Durbin-Watson	2.006

Change in Earnings and OCF as control variables have not shown any significant relationship with dividend policy. Further Tobin's q has shown significant relationship with DIV which indicates that with the rise in firm's value; there will be a positive change in dividend distribution. This can be supported with arguing that there is significant and positive relationship in between firm's value and dividend distribution because firms distribute more dividends with good faith and reputation while on other hand firms want to attain good faith and reputation through dividend distribution.

Firm's size has shown significant relationship with DIV which indicates that with the rise in firm's size; there will be a positive change in dividend distribution. This can be supported with arguing that firms distribute more dividends with good faith, reputation, and payout capacity. There is significant and positive relationship in between leverage and DIV ratio because according to cash flow theory, all earnings must be distributed among shareholders while positive and favorable NPV projects must be availed through debt financing. In such a case firm debt will increase in dividends distribution, so this shows such like behavior.  $R^2$  indicates the relationship of dependent and independent variables. Here value of  $R^2$  is 0.711 which shows that 71.1% dependent variable is explained by independent and control variables. Here relationship is very strong and fitness of model is also good. F-Statistics showing 8.474 values with significant p-value, it means model is good and fit.

### 8. Conclusion

The purpose of this study is to analyze the impact of ownership structure on DIV ratio of companies related to non-financial sector listed in Karachi stock. Descriptive statistics indicate that data of all variables are normal approximately. Correlation matrix indicates the relationship between dependent, independent, and control variables and also explains that problem of multicollinearity does not exist. For regression analysis, panel data technique has been used. In regression analysis MO as a component of ownership structure which has significant and negative relationship with DIV ratio which indicates that with the rise in MO, managers will prefer to retain because they will attain more benefits from investing in projects and will purchase further assets for that organization, and it is also supported by signaling theory because owners are working as managers of firm so they did not need to generate costly signal.

INST is also showing significant and positive behavior with DIV ratio which also showing favorable arguments for dividend distribution. It means in context of Pakistan, if firms have INST that will also lead to distribute more and more dividend to its shareholders. Those managers which think that dividend relevance theory is true and in real world firm's value is affected by dividend distribution, those will formulize such like dividend policies which support firm's value.

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### 9. Recommendations and future research

This study provides benefits to shareholders because they can attain benefits in adjusting their investment strategies. They can attain information regarding DIV ratio of organization designed by managerial owned and institutional firms with respect to its ownership. Finally, they can invest in such like firms which are providing more short-term benefits or capital gains with respect to investor's perspective. Managers could also understand the behavior during designing DIV ratio and they should also keep in mind rewards of investors. This study is based on limited sample of only 100 companies. Portfolios are not categorized in high, medium, and low capitalization. Same model can be tested in other market to its generalization. Future research can be conducted with increasing sample size, sample period or global firms relating to Asian Pacific countries, developed, and developing countries.

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