

## Do Growth Opportunities Influence the Relationship of Capital Structure, Dividend Policy and Ownership Structure with Firm Value: Empirical Evidence of KSE?

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### Abstract

The purpose of the study is to explore empirically the association among leverage, dividend payout ownership structure and firm value and influence of growth opportunities on this relationship. To obtain the correct empirical results this study applied the correlation analysis technique, ordinary least square (OLS) regression analysis on 148 non-financial companies listed on Karachi Stock Exchange (KSE), for the period of Five years (2011-2015). Using t-test and panel data regressions. The study found significant positive relationship between leverage, and firm value, and ownership concentration and firm value while insignificant association between dividend payout and firm value. The study further found that the interaction term of leverage and growth opportunities is insignificant, the interactive term of dividend payout and growth opportunities is also insignificant, and the interaction of ownership concentration and growth opportunities is also insignificant. So in the presence of growth opportunities the relationship of leverage, dividend payout and ownership structure with firm value does not affect. So growth opportunities do not play a moderating role.

**Keywords:** Leverage; Dividend payout; Ownership structure; Firm value; Growth opportunities

### Introduction

Efficiently allocation of a company's resources is vital for firm's growth, maximizing wealth of shareholders and sustainability [1]. Firm value creation and corporate growth opportunities play an essential role in corporate finance theory [2]. Stockholder's wealth is usually affected by sales growth, profit margin improvement, and capital structure and capital investment decision [3]. Corporate value in this instance can be observed as how good a company improves its stockholders' wealth and the ability of a company to generate high earnings and profit from the funds invested by stockholders. Therefore shareholders and managers develop and operate various strategies in order to maximize firm value. There are many factors examined in literature which affect firm value. Corporate debt and dividends are related to financial strategies in creation of firm value in the capital markets, and in number of relations among stakeholders [4].

Maximizing the firm value is the first priority of the owners and due to this reason owners are always serious about maintaining the capital structure that gives maximum output. The formative work done by Modigliani and Miller [5,6]. Weston and Brigham [7] argue that optimum capital structure is the level to which firm's market value is maximized for outstanding shares. Dividend policy influences the worth of a corporate and in turn, the worth of stockholders [8]. Furthermore it is also vital corporate issue and considered as the fourth strategic financial decision. Business practitioners and researchers should properly understand dividend policy because it is also crucial for various other such areas asset pricing, capital budgeting and mergers and acquisition [9].

Debt and dividend payout decision have not only influenced the firm value creation because the structure of corporate ownership can affect financial decisions and hence, it can also have a significant impact on corporate performance and firm value creation.

Sometimes high ownership concentrations may leads to accomplish their own welfares and exploit the welfare of minority stockholders

and company. The structure of ownership in Pakistan is usually characterized by strong concentrated ownership structures, La Porta et al. [10] suggest that those companies which are traded publicly in most countries have highly concentrated ownership. Cheema et al. [11] in Pakistani context find that the corporations' shares are commonly concentrated in the hand of largest stockholders.

Many researchers including McConnell and Servaes [12], Stulz et al. [13] and Iturriaga and Crisostomo [14] documented the large literature on the significance of corporation growth opportunities. These studies reveal that how, the problem of overinvestment arises when firm has no or low growth opportunities and confirmed the free cash flow hypothesis. However, in present of growth opportunities, previous studies authors believe that asymmetric of information and problems of adverse selection can arise [12,15,16]. Evidently, these changing circumstances can have different influences on the relationship among corporate financial decisions and the value of the firm. Among all other factors in capital market the financial decisions (debt and dividends) can be influential factors in order to create firm value and reduce the conflict of interest between shareholders, debt holders and the other individuals in the organizations [17].

Alonso and Iturriaga [16] reported in their article that too much concentrated ownership can produce adverse consequence since it can become a problem when the firm faces valuable growth opportunities

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demanding the ownership and control specialization [18]. Hence, ownership concentration may originate two possible effects: first, it resolves agency problems by enhancing a more in-depth control and, secondly, it could prevent growth opportunities' exploitation. In the view of the above discussion it is proved that growth opportunities play a prominent role in the theory of corporate finance and can modify the relationship between leverage, dividend and ownership structure with firm value. This study is going to pay the special attention to growth opportunities while exploring and testing the relationship in the context of Pakistan.

## Research Gap

Most of the studies on growth opportunities (high and low) have been conducted in the USA and European countries, However, very few studies has been conducted on Asian organizations [12,19]. Most of the previous studies researchers only checked the direct impact of financial decision and ownership structure on firm value but no such study has yet to be found to investigate the moderating role of growth opportunities on the relationship between financial decisions and ownership structure with firm worth. This study is going to focus and check that either Growth Opportunities Influence The relationship Of Ownership Structure, Leverage, Dividend Policy And Creation of Firm Value or not? . The current study is going to fill this gap in the research by analyzing that either growth opportunities modify the impact of debt, dividends and ownership structure on value of the firm or not? To the best of my limited knowledge, it may be the first study which would see the combined impact of financial decisions and ownership structure on firm worth and the role of growth opportunities that influence this relationship.

Karachi stock exchange provide an excellent sample to study how growth opportunities modify the impact of debt, dividends and ownership structure on the worth of the firm because of the special features of their corporate governance system, and ownership structure.

## Significance of the Study

Generally the study is important because it is the first study which explores the moderating role of growth opportunities on the relationship between financial decision and ownership structure with firm worth. This study plays a very essential role in the decisions of the academic researchers, financial experts and business practitioner to analyze the situation and take the accurate decision in the context of Pakistan. This study help firms to understand how growth opportunities influence the relationship between financial decisions, ownership structure and firm value in the context of Pakistan. The study focuses onto describe the importance of debt, dividend and ownership structure in the creation of firm worth in the presence and without presence of growth opportunities.

## Literature Review

Literature on financial decision and firm value relationship is very vast, but still scholars have contrary views regarding this topic. The influence of leverage, payout ratio, and ownership structure on firm's worth may vary, conditional on industry or firm characteristics.

### Capital structure and firm value

The strong foundation was developed by the Modigliani and Miller [5], due to which numerous theoretical frameworks were developed and these frameworks give boost to future theoretical research about capital structure.

The theoretical research of debt structure and its influence on firm's value creation and corporate performance has been a central issue in accounting and corporate finance theory [5]. MM-1958 argues that capital structure is not relevant in corporate value determination under the restrictive assumptions. According to first MM proposition, a firm's worth is not determined by the combination of securities its issues but actually real assets determine its worth, also known as theory of "capital structure irrelevance".

MM [20] in their tax corrected article review the effort of 1958, and in this paper suggested that due to the advantage of tax deduction interest payment companies should use more debt as possible in capital structure. At last they conclude that firm's value is an increasing function of capital structure. Furthermore, Jermias reported that optimal debt level provides advantage of tax as well as increased the efficiency due to the restrictions levied by the debt-holders.

In 1984 Myers and Majluf described that corporation first give preference to internal financing to finance their business projects if available, when internal financing are exhausted then firm next turn to generate fund through debts financing, and as a last option firm used equity financing, this theory tries to take into custody asymmetric information cost.

Examined that the capital structure is basically a marketing issue; they mention that companies issue large number of different securities and these are in various combinations. All these firms try to create such good combinations that maximize the value of market, [21]. Conduct the study and find out that the best and optimal capital structure is the one that market value of the companies those shares that are outstanding to market [7].

Grossman and Hart reported that higher Level of leverage decreases agency costs and increases corporate worth by motivating managers to give more preference to the benefits of equity shareholders. This is also known as the agency costs hypothesis. Zertun and Tian [22] conduct a study in Jordan for the time frame of fourteen years (1989-2003) and taking a sample of 167 firms. They reported that a firm's capital structure has negatively significant influence on corporate firm's performance for both market as well as accounting measures.

Roden and Lewellen [23] studied the leverage of forty eight US corporations over the time frame 1981 to 1990 and Shown a significant positively sign association among corporate performance and debt. The same outcome was found by Gosh et al. [24]. In another study Champion suggests that using leverage as an important tool for improving firm's performance. Hadlock and James [25] reported that corporate firms who want to maximize their profitability used more and more capital in the form of debts. In other words shows a positive impact on each other. A significant direct relationship between capital structure (STD and TD) and corporate performance of the Ghanaian companies was reported [26]. Berger and Bonaccorsi di Patti, provided identical outcomes.

Arbiyan and Safari investigated the impact of debt on firm performance by using one-hundred (100) Iranian companies for time period (2001-2007) their conclusion showed that STD and TD are positive related with ROE (profitability). While a negative inverse relationship found between LTD and ROE.

Adeyemi and oboh [27] studied the leverage and performance of firm's relationship in Nigeria. They reported in their results that in Nigeria a significant positively association exists between capital structure choice and its market value. They also suggest that firms

should manage and plan their leverage (capital structure) in such a manner that it maximizes their firm's market values.

Saedi and Mahmoodi [28] in their article using a data of 321 corporations listed on TSE Stock exchange over the sample frame (2002 to 2009). They examined the relationship between leverage and firm's performance. They used four proxies of performance including (return on asset, return on equity, Tobin's Q and earning per share) and three proxies of capital structure including (total debt (TD), long-term debt and short-term debt) the study Their analysis reported that corporate performance, which is proxies by EPS and Tobin's Q are positive significantly related with capital structure, while reported insignificant relation between roe and proxies of capital structured and a negative relation between capital structure proxies and ROA. Another similar study is conducted by Salim and Yadav [29] in Malaysia studied the same above relationship and used same four measurers of performance and three measures of capital structure and size is taken as a control variable. They used panel regression procedure for a selected sample of 237 listed companies listed on the bursa Stock Exchange for time period of fifteen years (1995-2011). The results shows that firm's performance, which is measured by (ROA, ROE and EPS) have inverse relationship with short-term debt (ST) long-term debt (LT) and total debt (TD). Furthermore, positive relationship found between the firm growth and performance for all the six sectors. The results of Tobin's Q indicate positive significant relationship with both short-term and long-term debt.

Shah and Tahir [30] in this study examined the number of non-financial listed companies in Pakistan, attempt to indicate the relationship of different variables with capital structure, other variables are not relevant to the study. The profitability is relevant to our study therefore, consider it and include in this research work. From the findings of this study it comes to know that the profitability and leverage has good relation. The profitability in this study measure by net profit before taxation divided by the value of total assets of firms, data obtain from income statement and balance sheets.

By contrast, many researchers discovered negative relationship of capital structure and profitability. According to Kester [31] while studying the impacts of capital structure on profitability in Japan and UK found a negative relationship. The Friend and Lang [32], during studying US firms Titman and Wessels and Wald [33] in the developed countries, found the same outcomes. Chakraborty examines a negative relationship between profitability and capitalization of the firms by using two measures. First, he uses ratio of earnings before interest, taxes and depreciation to the total assets and ratio of cash flow to total assets. Secondly, includes ratio of total borrowing to asset and ratio of total liability to sum total of liability and equity.

**H1:** Leverage has positive relationship with firm value.

### **Dividend payout and firm value**

The origins of the literature of dividend policy behavior linked to the model of Lintner [34] afterward the effort was advanced by the Fama and Babiak [35]. In previous fifty-two years a lot of studies have been carried out to test the association of dividend and corporate value theoretically as well as empirically. Generally there are two important theories (relevance and irrelevance) which debate on the influence of dividend on the corporate value. The discussion on the topic that whether dividends are relevant to creation of corporate value arises from the famous work of MM [6]. Miller and Modigliani [6] provided the background and idea of Irrelevance theory, which is the foundation

of modern corporate dividend theory. Their theoretical study explored that corporate dividend policy is independent of its market worth (value) and cost of capital. The factor that can impact the value of the corporations is the earnings capability of the firm or investment policy in a "Perfect" complete market.

Black and Scholes [36] supported the MM preposition by further suggested that there is no alteration in the profits of higher-yield and lower-yielding stocks. So, stockholders retain any of the stocks, income received by them keep constant. Adisola and Okwonge [37] also support the irrelevance preposition by taking in to consideration all the complete "perfect" assumptions described by Miler and Modigliani. But other researchers such as Rashid and Rehman [38] and DeAgelo and DeAgelo [39] provide contradictory results against the irrelevance theory and propose that notion of irrelevance theory is not realistic under taxation and transaction cost.

Gorden and Lintner presented the concept of Relevance theory of Dividend and give opinions against Irrelevance Theory. This is based on future dividends Uncertainty. Empirically studies conducted to check the impacts of dividend policy of payout on corporate worth (value) first comprise the empirical work done by Lintner [34]. He considered several determinants of dividend policy of corporation and check its impact on market worth of the corporate by conducting interview with the top level managers of twenty-eight US corporations. Investigation of his study indicates that market worth of any firm influenced by dividend payout. His investigation furthermore indicated that firms choose smoother dividend payout strategies and for this purpose they have try to achieved earnings stability. Baker and Powel [8] also reported that increase in payout ratio is a positive sign of larger earnings of a corporation in upcoming future which subsequently affects prices of stocks. Akbar and Baigg [40] suggested positively direct relationship between dividend policy and market prices of stocks.

Amiduu [41] by using panel regression equation concluded that dividend payout influence firm performance mainly the profitability (ROA). The statistical regression results displayed a significant and positive relation among corporate performance (ROA and ROE) and dividend policy. It's clearly indicates that when a corporate has a tactic to pay cash dividends, its performance is affected. Another similar study presented by Howaatt and reveled that positively variations in income from dividends related with positively variations in future real EPS.

Sulong and Nor [42] studied the effects of dividends, board governance and ownership type on Malaysian firm's value using sample of fourhanded and six listed firms from time period 2002 to 2005. Their findings reveal that dividend has a significant influence on corporate value (tobin Q). The finding also explored that dividend payout among Malaysian companies can play a significant role of monitoring instrument in dropping agency cost, therefore enhance firm's value.

Nazir et al. [43] found significant inverse relationship among volatility in prices of shares and dividend payout. While leverage and firm size has negative sign and statistically not significant influence on volatility of share prices. Suleiman et al. [44] studied the association of dividend yield with price volatility of share in Pakistani context, inconsistent to Baskkin [45], their investigation revealed that volatility of stock price has positively associated with dividend yield.

**H3:** Dividend payout has positive relationship with firm value.

### **Ownership structure and firm value**

Ownership structure shows the control of a corporation; in the

hands of a small number of individuals, management, Government, family-control, foreign stakeholders etc.

Berle and Means [46] declared that firm's performance tends to decline when there is dispersion of ownership and each hold a small percentage of total shares. They study US firms where the ownership is held by a small number of stockholders and controlled by insiders. Further Jensen and Meckling [47] suggested that larger stockholders might have stronger incentives to monitor and therefore, they should assist managers to be aligned with their interest of increasing the worth of their shares. But on the other hand, Fama and Jensen [48] discussed that ownership concentration beyond a certain level will enable managers to expropriate the wealth of minority stockholders. This argument has led towards the possible non-linear association of concentrated ownership and firm worth.

McConnell and Servaes [49] finding indicates a curvilinear significant relation among Tobin Q and percent (%) of shares in the hands of insiders, whereas Tobin Q is employed to measure the corporate performance. Further their results also indicate significant positive association between Tobin Q and percent (%) shares in the hands of the institutional investors. Another key conclusion is that the relationship of Tobin Q and block stockholders is not significant. They finally reported that the creation of corporate worth is a function of the corporate ownership structure. Cho had done study on a sample of 500 manufacturing firm of South Korea. OLS results indicated that ownership structure significantly influence the investment and subsequently the firm worth.

According to ref. [50] dispersion of ownership creates a chance of free riding, because due to lack of monitoring on managers, a positively relationship is expected among ownership concentration and corporate worth. To support this monitoring theory, ref. [51] point out the key role of largest shareholders. Claessens and Djankov [52] concluded that better ownership concentration has a strong positive influence on the profitability and productivity of labor of Czech firms. Nguyen [53] also supports the above results and reported similar strong positive associations of concentrated ownership with firm risk and corporate performance respectively. Xu and Wang [54] in Chinese corporate governance framework studied the ownership structure and corporate performance association. Their results revealed that concentrated ownership is significantly affecting the company performance. Lemmon and Lins [55] studied a sample of eight hundreds firms in 8 East Asian countries to investigate the effect of ownership structure on market value for the period of two years (1997-1998). They determined that due to the financial crises incentives of insiders increased and that insider have the capability to engage in the expropriation of minority investors. Rose in his study revealed that managerial ownership play a key role and highly impact on firm performance, moreover ownership concentration is prominent.

One another study conducted by King and Santor [56] on 612 Canadian firms suggested that the performance of family held firms seems identical as other firms. Two proxies used to measure performance (Tobin Q and ROA). They recognized that in Canadian prospective family owner's structure is not significant, but it is used to control enhancing method that drops corporate worth. Andres [57] in his study on 270 listed German companies concluded that those companies which are held by the family individuals seems to performed well as compare to others in the same kind of business and it also helpful in decreasing agency cost.

Using panel data method, Lee [58] in South Korea during 2000

to 2006 found that financial performance of firm commonly rises as fraction of concentrated ownership increases, while the influence of institutional and foreign ownership are statistically not significant. His findings further suggest that at middle level of ownership concentration performance of firm measured by ROA at peaks level.

Arosa et al. [14] examined the implication of corporate owner's structure on the corporate performance in Spain. Their results indicated that concentration (family firms) and performance varies and the reason behind this is that family firm's generation owns and manages to it. Park and Jang [59] tested the two hypotheses (entrenchment and convergence hypothesis). By employed 2SLS technique on restaurant industry and concluded positive significant relation.

Alimehmeti [60] investigated the impact of ownership concentration over corporate value of all Italian listed firms during the time period of 2006-2009 except in year 2008 their result show a significant positively impact of ownership concentration over firm value. While the result in 2008 shows a non-linear association, indicating that crises has increased the effects of expropriation.

Fazlzadeh et al. [61] conducted an important and recent study in Iran by taking a sample of 137 listed firm of TSE for the period of five years. They applied panel econometric regression technique to study the ownership structure and worth of a firm. They reported that the concentrated ownership doesn't show any significant influence on the firm value. While the result of institutional ownership shows positively significant effect on performance of firm.

Cheema et al. [11] recognized the nature of ownership structure in Pakistani context without investigating its influence on corporate performance. They find that majority of Pakistan firms are controlled and owned by institution or family. Later on Javid and Iqbal [62] in the context of Pakistan also checked its influence on corporate worth and suggested a positive association between concentrated ownership and performance of firm.

Wahla et al. [63] conducted a most recent study in Pakistani context by taking a sample size of 98 firms. Their result showed that fraction of shares held by top 5 shareholders (proxy of ownership concentration) has insignificant relation with firm's value. While the other proxy managerial ownership show negative significant impact on performance.

On the contrary, some researchers founded inverse association between concentration ownership and the firm worth. Demsetz and Lehn [64] using a linear regression procedure and found inverse association among concentration of ownership and worth of a firm (Tobin Q). In Kenya concentrated ownership has a strong inverse association with corporate wealth [65].

**H:** Ownership structure has positive relationship with firm value

### **Moderating role of growth opportunities**

Under agency theory, the relationship between growth opportunities and debt can be negative or positive. The relation between financial leverage and firm value following two complementary approaches: underinvestment theory and overinvestment theory. The underinvestment view [15] stresses the negative effect of too much corporate debt on firm value, since it may incentivize managers to forego profitable investment projects. Because of bondholders' priority over the firm's cash flow relative to shareholders, managers could forego projects with positive net present value (NPV) if the project's earnings will go to the creditors. Consequently, firm value is expected

to decrease in such a situation. In order to mitigate this problem, firms should finance growth opportunities with equity rather than debt [12,15]. Thus, we could expect a negative relation between debt and firm value in the presence of growth opportunities.

The overinvestment view applies when the firm has no growth opportunities, and is closely related to the free cash flow [13,15,66,67]. This theory emphasizes the negative consequences of too much cash flow under the discretionary control of managers. If the firm has no growth opportunities, managers are likely to be tempted to waste the cash flow on unproductive projects. Thus, a way to safeguard the value of the firm and discipline inefficient managers is to issue debt, so that managers lose control over free cash flow. According to this view, a positive relation exists between debt and firm value when the firm has no growth opportunities.

McConnell and Servaes [15] work on a sample of US listed firms by investigate the cross-sectional relationship between Tobin's Q debt and equity ownership for low and high growth firm. The result indicates a negative relationship between firm value creation and leverage for firm high growth opportunities (many positive net present value projects).

Matrin-Reyna and Duran-Encalada used 84 Mexican firms for the timeframe of 2005-2011 and concluded that for higher growth opportunities companies the relationship among leverage and performance becomes negative while in case of lower profitable opportunities the above relationship becomes positive.

According to the free cash flow model, Jensen [66] explained that funds available after financing all positive NPV projects can result in conflicts of interest between managers and shareholders. Clearly, dividends and debt interest payment decrease the free cash flow available to managers to invest in marginal net present value projects and manager perquisite consumption. Firms with higher levels of cash flow should have higher dividend payout and higher leverage.

In Brazil Lopez-Iturriaga and Crisostomo [68] conducted a study on 213 firms listed from period of 1995 to 2004 their final result reported that there exist negative relation between payout ratio and corporate worth in the existence of growth opportunities. They expect that given the information asymmetry and growth opportunities, paying of dividend by companies may lead to decrease in corporate worth.

The effective role of governance mechanisms in decreasing agency problems depend upon firm's growth opportunities [69]. Particularly, if agency problems are related with higher asymmetries of information (commonly in higher-growth companies), expect the effective role of governance mechanism in alleviating problem of asymmetric information is more effective in high-growth companies [67]. Conversely, if agency problems are related with disagreement over the use of free cash flow (commonly occurred in low-growth companies), expect governance mechanisms play important role to alleviate such problem in less growth companies [66].

Alonso and Istrugia [16] reported in their article that too much ownership concentration can yield opposing consequences since it can become a problem when the corporation faces valuable growth opportunities demanding the ownership and control specialization [18]. Hence, ownership concentration might initiate two possible effects: first, it resolves agency problems by a high control mechanism and secondly, it could prevent exploitation of growth opportunities.

In Brazil Lopez-Iturriaga and Crisostomo conducted a study on 213 listed firms from period of 1995 and 2004. They concluded that

ownership structure has a nonlinear effect that is, ownership structure (concentration of ownership) firstly increase's the worth of most of the companies. However, square of ownership concentration inversely related with firm worth in firms with higher growth opportunities, indicates that the risk rises that larger stockholders taking benefit at the expense of minority stockholders. Matrin-reyna and Duran-Encalada in Mexico examined the impact of ownership structure on firms worth when these companies have either higher or lower growth opportunities. They used 83 listed firms as a sample for seven year period 2005-2011 and results have shown that ownership structure play a dual role on firm performance. Ghalandari [70] conducted a study in Iran found significant nonlinear association among concentrated ownership and corporate value in both cases high and low growth opportunities.

Florackis [71] concluded that ownership is an efficient governance tool mainly for higher-growth opportunities firms. The result of interactive term of growth opportunities and executive ownership is positively significant. These outcomes support the results obtained by Lasfer [69]. Lasfer [69] intend the positive association among ownership and corporate worth is stronger in higher-growth firms.

**H4:** Growth opportunities moderate the relationship of leverage and firm's worth.

**H6:** Growth opportunities moderate the relationship of dividend payout and firm's worth.

**H6:** Growth opportunities moderate the relationship of ownership structure and firm's worth.

## Model of the study (Figure 1)

### Methodology

#### Population and sample of the study

In this research the population is composed of all the 667 companies listed on Karachi stock exchange. According to information given in SBP report in year 2012, total 398 nonfinancial companies are listed on KSE, respectively. In order to accomplish the objectives of the research study a sample size is comprises of 148 non-financial companies randomly selected from KSE for the last five years 2011-2015 has been taken into consideration. The size of the sample has been selected on the basis of available information about the data set of all the variables of the study for a single firm. The chosen sample of the study denotes firms from all the sectors.

#### Data collection and type

Secondary type data have been used in this study. In order to compute the variables of the study, the secondary data will be collected from yearly reports of listed firms of KSE and from the SBP annual

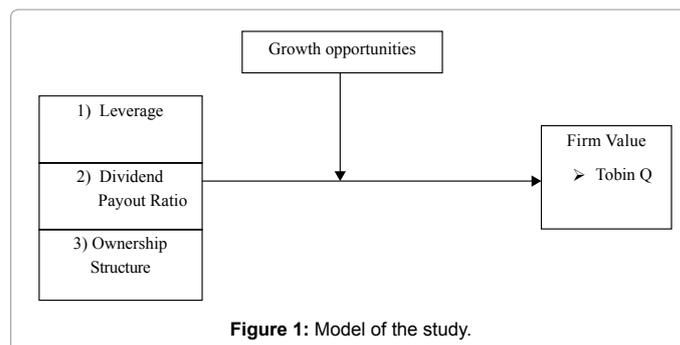


Figure 1: Model of the study.

balance sheet analysis (BSA) of companies' and from business recorder web site.

The dividend and market capitalization data were collected from historical data available at the KSE website. Market capitalization is an important part used in the Tobin Q (firm value) calculation which is an important indicator of corporate market value. While outstanding share prices data have been collected from ZHV securities and no of outstanding shares data are collected from yearly financial reports of the corporations in order to find market capitalization which is vital for firm market performance variable Tobin's Q. The research analysis has been done from 2011 to 2015.

## Calculation and Measurement of Variables

### Measurement of growth opportunities

This section explains the measure of growth opportunities to be employed in the study. A main feature of the study is to recognize and measure growth opportunities [72] suggest that there is close association between corporate value and growth opportunities. The proposed study will follow the most commonly used (proxies) sales rate of growth ratio to evaluate the growth opportunities of a firm.

Sales growth provides opportunities or economies of scale and learning curve benefits. However, sales growth might not always lead to better corporate performance. According to agency theory, managers pursue growth because growth helps them achieve personal objectives

- Sales rate of growth ratio used by Alonsa and Iturriaga [16] as proxy of growth opportunities.
- MBVA ratio (market value to book value of assets).

### Dependent variable

Tobin Q will be used for firm value (External performance).

Tobin's Q, is the ratio of the market value of a firm's assets (as measured by the market value of its outstanding shares and deb) to the replacement cost of the firm's.

Tobin's Q measurement is difficult and can't use this formula because large fraction of the corporate debt is institutional debt that is not actively traded in the debt market further, the replacement cost of companies are not available because most companies report asset values to historical costs. Therefore in line with Shah et al. [30] total assets have been used in place of replacement. Thus Tobin's Q is calculated as

$$Q = \frac{EMV + D}{\text{book value of assets}} \text{ Financial q. Value creation.}$$

$$EMV = \text{Equity market value.}$$

$$D = \text{total debts (book value)}$$

### Independent variables

In the current study, three independent variables namely leverage, pay-out ratio and ownership concentration are used. Calculations of these variables are given below:

### LEVERAGE (Levrg)

Capital structure of a corporation is measured with leverage. There are various proxies used to calculate leverage such as long term debt (LTD) to total assets, short term debt (STD) to total assets and total liability to total assets. The study used total debt value divided by total assets as a measure of leverage. The same measure has been used by,

Alonsa and Iturriaga [16] and Mehmat (2009) Leverage is calculated as total debt value divided by book value of all assets.

$$\text{LEVERAG RATIO} = \frac{\text{total debt}}{\text{total assets}}$$

### Dividend policy

$$\text{PAYOUT RATIO} = \frac{\text{Dividends per Share}}{\text{Earnings per Share}}$$

### Ownership structure

The empirical evidence suggests that In Pakistan ownership is concentrated [11]. Javid and Iqbal [62] showed that in Pakistan companies have more Concentration of ownership which is the response of weak legal environment. Higher concentration of ownership has stronger voting power and control to monitor and therefore, they should assist managers to be aligned with their interest of increasing the worth of their share [66].

To measure the ownership structure, the research study used the fraction of shares held by the top 5 shareholders to measure ownership concentration.

### Ownership variable description

Concentration ownership % of total shares held by the top 5 shareholder/total number of shares.

### Control variables

Firm size is calculated by taking the natural logarithm of firm's total assets.

Fama and French [35] and Bhabra determine that firm's performance is opposite related to the size of the firm. Large Corporations are hindered by operative incompetence which could be the outcome of many factors like lack of attention or a smaller degree of transparency in decision-making actions. Hence they are expected to have risen up levels of agency conflicts.

On the other hand, Short and Keasey [73] argue that size has a direct significantly influence on firm's performance, since bigger firms have the ability to access fund resources with greater ease.

### Empirical Models of the Study

The basic econometric model used in this study is given by [16]

$$\text{Tobin Q} = \alpha + \beta_1 (\text{leverage}) + \beta_2 (\text{dividend payout}) + \beta_3 (\text{ownership structure}) + \beta_4 (\text{leverage}) * \text{Growth opportunities} + \beta_5 (\text{dividend payout}) * \text{Growth opportunities} + \beta_6 (\text{ownership structure}) * \text{Growth opportunities} + \beta_7 (\text{Control Variables}) + \mu$$

### Panel Regression Model

$$(Q)_{it} = \alpha + \beta_1 \text{LEVRG}_{it} + \beta_2 \text{DIV}_{it} + \beta_3 \text{OWN.CNS}_{it} + \beta_4 \text{LEVRG}_{it} * \text{GOP}_{it} + \beta_5 \text{DIV.POUT}_{it} * \text{GOP}_{it} + \beta_6 \text{OWN.CNS}_{it} * \text{GOP}_{it} + \beta_7 \text{SZ}_{it} + \mu_{it}$$

### Panel Data Analysis Models

The nature of the data is the combination of time series (five years) and cross section data (one forty-eight firms), known as panel data. The balanced panel data regression technique has been used in the study. Three different econometric panel models have been used in this study to produce generalized results.

### Common Effect Model

CEM (Common effect model) is a pooled regression techniques used in panel data. The basic assumption of CEM is that coefficients

will remain constant. It is used with constant intercept and slope coefficient all over cross section and time period [74].

Practically the common effect techniques implies that there are no differences between the estimated cross section and it is useful under the hypothesis that the data set is a priori homogeneous. This assumption is too much restrictive and behind the reality.

### Fixed Effect Model

Fixed effect model is another modeling technique, where slopes coefficients are kept constant but the intercepts varies with the cross-section [74]. In FEM constant is treated as cross section (group) specific. It allows for different constants for each cross section. FEM is also known as LSDV (least square dummy variable) estimator, because it practices dummy variables for taking different constant for each cross section [74]. The alternative hypothesis is that all constant are not the same and therefor fixed effect model is appropriate one.

**F-statistics:** To decide between common effect model and fixed effect model. If F statistics value significant then use fixed effect model.

$$F = \frac{(R_{FE}^2 - R_{CC}^2) / (N - 1)}{(1 - R_{FE}^2) / (NT - N - K)}$$

### Random Effect Model (REM)

According to Wooldridge fixed effect model is not the more efficient for panel data analysis. Therefore, researcher also used random effect model as a panel data analysis model. In random effect model the intercept coefficient is the average of individual intercepts of all cross-sectional units [74].

**Haussmann test:** Haussmann test is used to choose best model among fixed and random effect model for specific research study [74].

**Decision rule:** if value of Chi-square statistics is significant then use fixed effect model.

## Results and Discussion of the Study

This research study used different statistical procedures to analyze the data such as descriptive stat, correlation analysis and panel regression measures etc., in order to explore the influence of growth opportunities (moderator) on the relation between financial decisions and ownership concentration with corporate value. All these statistical measures are discussed in detailed in table given below.

### Descriptive statistics

Table 1 given below shows the mean values and standard deviation values of all explanatory variables, dependent variables and moderator variable. The total 740 observations used in the study.

The table above shows the mean value and standard deviation value of both dependent and explanatory variables. The mean value and standard deviation value of dependent variable (Tobin Q) is 1.429527

Variables	Dimension	Mean	Standard deviation
Firm value creation	Tobin's Q	1.429527	0.651968
leverage	Debt to asset ratio	0.586895	0.808206
Dividend	Dividend payout	0.277248	0.777129
Ownership structure	Ownership concentration	0.640514	0.197490
Firm size	Log of total assets	6.691366	0.618375
Growth opportunities	Sales growth	0.220740	0.356084

N (Total observation) =740.

Table 1: Descriptive Statistics.

and 0.651968, respectively. The average value of Tobin Q is greater than 1 shows that the market worth of KSE firms is more than their book value. The mean value and standard deviation value Leverage is 0.586895 and 0.808206, respectively. Which display that most of the Pakistani firms are highly levered. The mean value of dividend payout is 0.277248, which clearly indicate that in Pakistan payout ratio is low because most of the companies pay low or even no dividend. The mean value of ownership concentration is 0.640514, which shows that most of the firms are highly concentrated in Pakistan. La Porta et al. [10] suggest that those companies which are traded publicly in most countries have highly concentrated ownership. Cheema et al. [11] in Pakistani context find that the corporations' shares are commonly concentrated in the hand of largest stockholders.

### Correlation analysis of the variables

Table 2 demonstrates the correlation matrix analysis between Firm Value (depended variable) and leverage, dividend payout and Ownership Structure (explanatory variables) growth opportunities (moderator variable) used in the study. Leverage has significant positively associated at 99% interval level with a corporate value (Tobin's Q) as it verifies the first hypotheses of the study. Dividend payout is weakly significantly correlated with firm value creation at 90 percent level of confidence, because most of the companies pay low or even no dividend in Pakistan. Ownership concentration strongly significantly and positively associated at 99%t confidence with a Tobin's Q. This displays that ownership structure (ownership concentration) will raise firm value. Ownership concentration gives high incentives to management for the purpose of monitoring and evaluation the business activities to accomplish value maximization [75]. Firm size is significantly negatively correlated with firm value. The growth opportunities are insignificantly positively correlated at 99% confidence level with a Tobin's Q.

### Panel regression

To investigate the impact of explanatory variables (leverage, payout ratio and ownership concentration) on a dependent variable (corporate value) moderating by growth opportunities a panel data regression has been used. The technique of panel data regression has been used because the data have both features of cross section and time series. There are three models in panel data procedure so first of all data has been analyzed. Gujarati [74] in his econometric book stated that Durbin Watson test figure can be used to make decision about which model should be used to analyze the data. The larger value of D-W statistic is the indication of the better model. In Table 3 the D-W statistic value of fixed effect is 1.66 which is greater than 0.32 the value of common effect model. Clearly showing that fixed effect model should be appropriate to use. In order to make proper selection among fixed and random effect Housman Statistics has been used in order to select fit model. P value determined the significance of Housmen test the p value less than 0.05 suggest that fixed effect model should efficient to be used. The p value given in the Table 1 which is less than 0.05.

	Tobin-Q	Levrg	Div.pout	Own.cons	size	GOP
Tobin-Q	1					
levrg	0.367** 0.000	1				
div.pout	0.065 0.077	-0.008 0.829	1			
Own.cons	0.109** 0.000	0.043 0.245	0.057 .121	1		
SZ	-0.092' 0.012	0.030 0.409	0.048 0.192	0.048 0.194	1	
GOP	0.0520 0.158	-0.49 0.181	0.007 0.857	-0.054 0.142	0.003 0.928	1

N=740. \*\*, Correlation is significant at the 0.01 (1%) levels. \* Correlation is significant at the 0.05 (5%) level.

Table 2: Correlation Analysis of all variables.

Dependent Variable=Firm value (Tobin's Q)			
Independent Variables	Coefficients	t-Value	p-Value
leverage	0.989847	18.07424	0.000
Dividend payout	0.083891	1.410257	0.15890
Ownership structure	1.975055	4.388284	0.0000
Size	-1.903805	-5.669870	0.0002
R Square	84.48%		
F value	20.88		
Prob (F-statistic)	0.0000		

Table 3: Fixed effect model result.

Hence, fixed effect has been suitable and the fit choice to analyze the data. The chi square value is also significant which also suggest that fixed effect is suitable to use.

This portion displays the results of the pool econometric technique to investigate the suggested hypothesis.

The above Table 3 shows R square 84.48%, value of F-statistic is 20.88 and p value 0.00 which indicates the explained power and fitness of the model respectively. The coefficient sign of leverage is positive and the value of coefficient is 0.989847, t-stat value is 18.07424 and the p-value is 0.00 which indicates that the leverage has a significant positive relationship at 1% level of significance with corporate worth. Statistical interpretation of leverage coefficient is that one unit change in leverage will bring 0.989847, unit's increase in firm value, other thing keep constant. This verifies (hypothesis 1) of the study, and the results are consistent with previous studies of ref. [29]. The results also support the relevance theory of MM. Maximum use of debt produce tax saving which in turn play an important role in firm worth [76]. The beta (coefficient) value of dividend payout is 0.083891, t-stat value and p value are 1.410257 and 0.15980, respectively, which indicate that dividend payout has insignificant positive relation with corporate value. This result opposes the third hypothesis. The reason behind this insignificant result is that in Pakistan firms don't have stable dividend policy and most firms pay low dividend (low dividend payout ratio). The beta (coefficient) value of concentrated ownership is 1.975055, t-stat value is 4.388284 and value of p is 0.0000 which denote that concentrated ownership has a significant positive influence over a firm value (Tobin Q) at 1 (%) percent. Statistical interpretation of ownership coefficient is that one unit change in ownership concentration will bring 1.975055 unit's increase in firm value, other thing keep constant. Significant and positive relation of concentrated ownership and corporate value is found to support the results of Nguyen [53]. The corporate performance enhanced significantly and efficiently when interest of owner and interest of manager joined through concentration of ownership [62]. The reason behind this is that larger shareholder might have stronger incentives to monitor and therefore, they should

assist managers to be aligned with their interest of increasing the worth of their shares Jensen and Meckling [66]. Concentration of ownership lower agency costs. The above discussion demonstrates that more concentration of ownership will lead to increase corporate value. This verifies hypothesis no third of the study. The firm size coefficient is negative significantly related with firm value. The results of firm size is consistent with the results of previous study conducted by Bhabra determine that firm's performance is opposite related to the size of the firm. Large Corporations are hindered by operative incompetence which could be the outcome of many factors like lack of attention or a smaller degree of transparency in decision-making actions.

**Moderation:** As depicted in the model of the study, a growth opportunity is proposed to be moderating the relationship between financial decision and ownership structure with firm value. For checking this hypothesized relationship interactions term of growth opportunities with explanatory variables are found.

$$\text{Tobin-Q} = \alpha + \beta_1(\text{leverage}) + \beta_2(\text{dividend payout}) + \beta_3(\text{ownership structure}) + \beta_4(\text{leverage}) * \text{Growth opportunities} + \beta_5(\text{dividend payout}) * \text{Growth opportunities} + \beta_6(\text{ownership structure}) * \text{Growth opportunities} + \text{Control Variables} + \mu$$

$$\text{Tobin-Q} = \alpha + \beta_1(\text{levrg}) + \beta_2(\text{div. Pout}) + \beta_3(\text{own. Cons}) + \beta_4(\text{levrg}) * \text{GOP} + \beta_5(\text{div. Pout}) * \text{GOP} + \beta_6(\text{own. Cons}) * \text{GOP} + \text{Control Variables} + \mu$$

As shown in the above equation, growth opportunities have been taken as an interactive term with leverage, dividend payout and ownership structure in order to check whether it influences or moderates the relationship between leverage, dividend payout and ownership structure with firm value. The equation was analyzed and results are shown in below table no.

The above Table 4 shows, in order to find the influence of moderation, the regression was run in two stages. In the initial step analysis moderation was removed and R<sup>2</sup> (model fitness) was checked having value of 84% shown in the above table. This figure indicates that financial decision and ownership structure shows 84% variation in firm value creation. In the final step of analysis moderator was entered in to the equation and fitness of model (R<sup>2</sup>) was checked once again. In this value of R square reported to be 84% in the above table as R square change is 0% due to incorporating moderation effect. The interacting term of leverage\*growth Opportunities indicates positively insignificant relationship with firm value. The second interacting term dividend payout\*growth opportunities has been reported to be negatively insignificant. The last interaction term ownership concentration\*growth opportunities also indicate positive and statistically insignificant relationship with firm value. So the above results indicate that growth opportunities do not moderate the

hypothesized relationships. The interactive terms results shows that the relationship of financial decision and ownership structure with firm value does not influenced by the growth opportunities. The relationship of leverage, dividend payout and ownership concentration with firm worth remains the same if firms have high or low growth opportunities. The R square change also shows that growth opportunities do not moderate the relationship.

**Regression results of high and low growth companies:** To follow McConnell & Servaes [12] methodology on the bases of growth opportunities the whole sample size is divided in to 3 portion (groups) the first group consists of the upper 45% companies having higher MBVA ratio (high-growth) and the second group comprises of lower 45% of companies having the lower MBVA ratio (low growth) and the middles companies are eliminated from study. For high and low growth opportunities companies separate regression analysis has been performed.

The above Table 5 shows the panel regression results of both high and low growth opportunities firms. The regression equation has been run for low growth opportunities companies and high growth opportunities companies separately. Leverage has significant positive relation with firm worth shown by p value 0.00 and t state value 12.47 when firms have high growth opportunities. This result does not support the results of previous studies. For lower growth Leverage has also positively significant association with corporate value at 1% level of confidence. These outcomes are in line with the previous research work done by Iturriaga and Crisóstomo and Alonsa et al. [16]. Dividend payout coefficient shows insignificant influence on firm worth with firms have low and high growth opportunities. The ownership concentration has significant positive association with corporate value in case of high growth opportunities while in case of low growth opportunities it also gives insignificant results. To capture the nonlinear effect of ownership concentration square of ownership

Variables	β Coefficient	Significance (p-value)	Rsquare	Rsquare change
Step 1st				
Levrg	0.989847	0.0000		
Div.pout	0.083891	0.15890	84%	
Own.cons	1.975055	0.0000		
Size	-1.902305	0.0002		0%
Step 2nd				
Levrg	0.995637	0.0000		
Div.pout	0.110448	0.0983		
Own.cons	1.920781	0.0000		
Size	-2.044513	0.0000		
Levrg. GOP	0.141735	0.6217	84%	
Div. pout*GOP	-0.101346	0.4613		
Own.	0.235804	0.4485		
Cons*GOP				

Table 4: Moderation regression analysis.

	High growth (companies)			Low growth (companies)		
	Coefficient	t-value	p-value	Coefficient	t-value	p-value
Levrg	0.9925	12.47	0.0000	0.8184	16.13	0.000
Div. pout	0.1304	0.9115	0.3627	0.0264	1.7834	0.075
Own. Cons	1.9616	2.9806	0.0031	0.1031	0.2720	0.7858
Sqr Own. Cons	-1.4543	-0.69347	0.4885	-0.0950	-0.3029	0.7621
SZ	-0.9279	-3.34288	0.0009	-0.0896	-3.8098	0.002

$$\text{Tobin-Q} = \alpha + \beta_1(\text{levrg}) + \beta_2(\text{div. Pout}) + \beta_3(\text{own. Cons}) + \beta_4(\text{sqown.cons}) + \beta_2(\text{div. Pout}) + Fz + \mu$$

Table 5: Depended variable: firm value.

concentration has been taken. Square of ownership concentration in both cases (high and low growth opportunities) shows negative insignificant impact on corporate value. This indicates that ownership concentration firstly influence and enhanced the corporate value of most of the corporations. However, at higher ownership concentration firms with growth opportunities, the risk increases that largest stock holder benefit at the expense of minority stockholders.

## Conclusion

This study investigated the relationship between corporate leverage, dividend payout and ownership concentration with corporate value, and the moderating role of growth opportunities on this relationship. To obtain precise results this study employed various statistical tools like correlation analysis, descriptive statistic, panel econometric regression procedures on 148 firms traded on KSE (Karachi Stock Exchange) during the period of 2008-2012. In first step of the analysis, the direct influence of corporate leverage, pay-out ratio and ownership structure on corporate value has been investigated, and in second step moderating effect of growth opportunities on the above relation has been examined. In first step the results displayed that there is a significant positively relation between, corporate leverage and firm worth in Pakistani context. These findings found parallel to the results of ref. [29]. The results also support the relevance theory of MM. Maximum use of debt produce tax saving which in turn play an important role in firm worth [76]. The dividend payout has insignificant relation with corporate value in Pakistan. The reason behind this insignificant relationship is that in Pakistan dividend policy is not stable and most companies pay low or even no dividend. The study found that ownership concentration plays a very significant role in enhancing firm value. The significantly positive relationship of ownership concentration is similar to the results of Javaid and Iqbal [62] in Pakistan. The corporate performance enhanced significantly and efficiently when interest of owner and interest of manager joined through concentration of ownership.

In second steps of the analysis, the moderating role of growth opportunities has been examined. By evaluating the results, the study has shown that interaction term of leverage and growth opportunities (lev\*gop) is insignificant. While the interactive term of dividend payout and growth opportunities is also insignificant, showing that in presence of growth opportunities dividend payout does not play any significant role in corporate worth. The interaction of ownership concentration and growth opportunities is insignificant indicating that in presence of high growth opportunities concentrated ownership does not significantly enhancing corporate worth. Furthermore the sample of the study divided in to low growth (companies) and high growth companies on the basis of MBVA. The Leverage has positively significant influence over corporate worth in both high and low growth firms. These findings do not support the dual role of leverage on firm worth. The dividend payout ratio shows insignificant relation with firm value in case of high growth opportunities; while in case of low growth

opportunities it is also insignificant. The ownership structure seems to have positively significant influence over firm value in case of high growth opportunities (close monitoring effect) while in case of low growth opportunities it reveals insignificant influence over corporate value.

### Boundaries of the Research Study

The study is conducted in the below limitations;

- This research study conducted on the sample of 148 non-financial Pakistani companies.
- The study only considered the time frame from 2008 to 2012.
- The research study considered only those companies whose financial reports are available and accessible because availability of the data is one of the main issues in the context of Pakistan.

### Recommendations

This research study suggest following recommendations.

The research recommends to the academic researchers and business practitioners, that ownership concentration enhanced value of a firm because the larger shareholders monitor and evaluate the operating actions and allow the organization to use entirely capitals in effective way that contributes in the better organizational performance.

This study also recommends that relationship of leverage, dividend payout and ownership concentration with firm worth do not influenced by growth opportunities.

### Future Directions

The following areas can be explored for future research studies;

- Different proxies can be taken for the measurement of growth opportunities, ownership structure and firm value to investigate the above relationship.
- Larger sample size can be taken to analyze the relationship among leverage, dividend payout, ownership structure and firm value.
- Future study can be taken to compare the various countries results analysis.
- Comparative analysis between South Asian Economies.

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