THE IMPACT OF INVESTMENT OPPORTUNITY SET AND LEVERAGE ON DIVIDEND POLICY: CASE OF PAKISTANI MARKET

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In the name of Allah, the most merciful and beneficent

DEDICATION

I dedicate this thesis to my parents who sacrifice my present for my future and my supervisor whose support has enabled me

to complete this research study successfully.

(Acceptance by the Viva Voice Committee)

Title of Thesis: "The Impact of Investment Opportunity Set and Leverage on Dividend Policy: Case of Pakistani Market."

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Abstract

The purpose of this study is to explore the impact of investment opportunity set and leverage on dividend policy of Pakistani listed firms. Sample of study includes 95 non-financial firms listed at Karachi Stock Exchange. The sample period is 7 years from 2006 to 2012. The study employed OLS and fixed effect model estimation. The independent variable investment opportunity set is measured by 3 proxies named earning price ratio, market to book equity ratio and capital expenditure to book value of plant property and equipment ratio. The 2nd independent variable is Leverage and Dependent variable of the study is Dividend payout. The findings of the study are not consistent with the previous studies conducted in developed markets regarding investment, leverage and dividend policy (Hananeh et al, 2013; Zeng, 2003; Collins et al, 1996). It is found that dividend decision is independent from decision of investment and corporate debt policy. The reason of insignificant relationship between investment opportunities and dividend policy is that there are many firms having investment opportunities available to them but still pay dividend because these companies held a good reputation and they can easily obtain a loan for investment. It is also found that Pakistan public debt market is not well established. Majority of loan are authorized on socio-political basis and such loans are endorsed for a specific project and are contributed in capital employed by the firm that's why financial leverage cannot be considered as having significant relationship with dividend policy of Pakistani listed firms. Hence it is important to pay attention on improving Corporate Governance issues to increase the value of firm.

Key Words: Investment opportunity set, Leverage, Dividend policy, Karachi stock exchange, Pakistan.

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DECLARATION

I hereby declare that this thesis, neither as a whole nor as a part thereof, has been copied out from any source. It is further declared that I have prepared this thesis entirely on the basis of my personal effort made under the sincere guidance of my supervisor and Friends. No portion of work, presented in this thesis has been submitted in support of any application for any degree or qualification of this or any other university or institute of learning.

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Sumara Shah

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List of Abbreviation

INV	Investment opportunities
DP	Dividend Payout
CAPX/PPE	Capital Expenditure to net plant property equipment
EP ratio	Earning Price ratio
MBE ratio	Market to Book Value of Equity
FCF	Free Cash Flow
NPV	Net present Value
KSE	Karachi Stock Exchange
D/S	Dividend per Share
TA	Total Asset
LEV	Leverage

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CHAPTER 1

INTRODUCTION

1.1 Background and Purpose of the Study

Management of any company pays particular consideration to investment and financing decision which are the important elements of financial planning process. The most significant financial planning factors among all are investment opportunities analysis, to select the best method of financing and determining an appropriate dividend policy. As investment opportunities requires financing resources and in order to create propensity among investors and shareholders, these resources can also be disbursed as dividend. Therefore decision regarding financing and to select cheaper resources for allocation to investment opportunities having positive net present value and distributing profit as dividend is of immense significance to management of the company.

Zakaria et al (2012) had conducted a research entitled "A review of effect of dividend policy on share price variation". The results showed that 43.43% change in share price is explained by investment growth, dividend change, profit change and financial leverage. The ratio of dividend has major impact on share price change. The larger the size of the company, the higher the major impact of dividend on variation in share price.

In the field of finance dividend policy remained an interesting topic that attracted many scholars. Various researchers presented uncountable empirical evidences and theories, but the issue is still unsolved and open for more discussion. In finance literature this issue is among top ten unresolved

problems and still not has an adequate explanation about the firm's dividend behavior (Black, 1976; Allen & Michaely, 2003; Brealey & Myers, 2005). Dividend is a matter of concern to all investors as they are a source of income and most importantly dividends provide the investors an insight about the performance of the company. Setting an appropriate dividend policy is a critical task for management as it has a major influence on share price of the company and also influence the capital structure, asset pricing, capital budgeting and mergers and acquisition (Allen & Michaely, 1994).

In 1956 dividend policy got attention with work of Lintner (1956). He raised the question "What choices made by mangers do affect the size, shape and timings of dividend payment?" which is still important. After the large contribution made by Lintner in the field of finance, Miller & Modigliani (1961) had given another view about the dividend policy. They argued that dividend policy have no influence on the value of the firm, the only things that have an effect on the value of the firm is the investment policy. Up till now this issue still remains arguable among researchers whether it affects firm value or not.

Black (1976) mentioned that "the harder we look at the dividend picture, the more it seems like a puzzle, with pieces that just do not fit together". There are various reasons either firm should pay dividend or not. The "dividend puzzle" why companies pay dividend and why shareholders have interest in dividends is still unresolved. Generally a firm gets the problem of distribution of earnings, whether to allocate among shareholders or should retained for reinvestment and uphold firm growth.

There are many factors that have an impact on dividend policy of company including risk, company's profitability, size and ownership. Investment opportunity set and leverage play a vital role in shaping dividend policy. Investment opportunities accessible to firm are one of the important factors of company's growth and the firms which have more growth opportunities generally have higher share price (Myers, 1977). The research of Gordon (1963) showed that firm with low dividend payout tend to be more valued in terms of future investment opportunities. Hence firms with expanding opportunities have lower dividend payout ratios and exhibit stable prices.

The impact of investment and financing decision on firm value has been the centre of extensive research since "separation principle" has been proposed by Modigliani & Miller (1958). The theory asserts that in a perfect capital market when there is no transaction cost, taxes or information asymmetry, value of the firm has not been affected by dividend policy, the only thing that affects the value of the firm is the investment policy. Some authors supported this view but others have contrasted views that investment and dividend policy are interrelated and found that Modigliani and Miller's ideal world does not exist (Grabowski and Mueller, 1972; McCabe, 1979; Anderson & Smith, 2006). Bierman and Hass (1983) argued that management usually decides the dividend payout level in perspective of forecasting the firm's sources and use of funds. Taking into account the investment opportunities of the firm and its internal cash generation potential, both dividend policy and capital structure are selected to make sure that sufficient funds are available to carry out all desirable investments without using new equity (Black, 1976).

Investment and leverage influences the policy of dividend because it is effective in changing company's dividends. Firms with high growth opportunities or investment opportunities are less likely to pay dividend due to lower free cash flows. These firms have less flexibility in their dividend policy to reduce their dependence on costly external financing .On the other hand firms with low investment opportunities are more likely to pay dividend in order to overcome free cash flows problems (Jensen, 1986). The leverage also influences the dividend behavior of the firms, firms with higher leverage pay less dividend to avoid higher cost of raising external finance for the firm (Higgins, 1972). Companies with high leverage keep the internal cash flows rather than distribute it to shareholders and support the creditors because high leverage companies experience more financial cost for providing finance therefore firm's have to keep their internal cash flows for accomplishing its tasks rather than distribute it to shareholders. Hence the purpose of this study is to explore the impact of between investment opportunity set and Leverage on dividend policy of Pakistani non financial firms.

1.2 Theoretical Foundation

Agency cost theory; free cash flow theory and passive residual theory play a vital role in proposed study.

Agency cost theory: Jensen and Meckling (1976) explain that agency relationship is a contract when principal appoint agent to act on his behalf. He creates appropriate incentives to agent. But agent not always acts for interest of principal that leads to agency conflicts of principal and agents.

Easterbrook (1984), Meckling (1976) and Rozeff (1982) suggested that dividend is a mechanism to mitigate agency problems because it reduces the funds for managers to misappropriate the earnings of shareholders .They argued that dividend leads to lower agency costs. Because when a firm pay lower dividend, managers use the free cash flows for their private benefit especially in countries where there is weak legal protection for minority shareholders. Due to this outside shareholders or minority shareholders lose their interest from dividend.

Free Cash flow Theory: Jensen (1986) defined free cash flow as cash flow left after funding all positive net present value projects. If these free cash flows will invest in sub optimal projects, firm get poor profitability. He also suggests that in the existence of free cash flows, managers have propensity to over invest to get the financial and non financial privileges of larger firms.

According to free cash flow theory, managers of the firm with few investment opportunities and high free cash flow pay out more dividends since they have fewer growth opportunities to invest in positive NPV projects. While firms with more investment opportunities pay less dividend since these firms need the cash for investment opportunities (Smith & Watts, 1992).

Vogt (1994) also found free cash flow performance in the capital investment of big firms though overinvestment problem is more serious in mature firms with less growth opportunities. These firms experience lack of positive net present value projects as free cash flows of the firms are invested in sub optimal projects by managers.

Passive Residual Theory of Dividend: The essence of the residual theory of dividend policy is that the firm will only pay dividends from residual earnings, that is from earnings left over after all suitable (positive NPV) investment opportunities have been financed. Retained earnings are the most important source for financing for most companies. A residual approach to the Dividend policy means that the first claim on retained earnings is to finance the investment projects. With the residual Dividend Policy, the focal point of the firm's management is indeed on investment, not dividends. Dividend policy becomes inappropriate; it is treated as a passive rather than an active decision. The analysis of management in this case is that the firm value and the shareholders wealth will be enhanced by investing the earnings in the suitable investment projects, relatively paying them out as dividends to shareholders. Thus managers will dynamically seek out, and invest the firm's earnings in positive Net present value investment projects, which are likely to increase the firm value. Dividends will only be paid when retained earnings exceed the funds necessary to finance the appropriate investment projects. On the other hand when the total investment funds required go beyond retained earnings, no dividend will be paid (Lang & Litzenberger,1989).

1.3 Statement of research problem

A shareholder expects an adequate return from his investment whether it is in the form of dividend or in the form of capital gain. Paying dividend is a strategic decision undertaken by board of directors of company. The dividend decision becomes more critical when there is concentrated ownership that arise agency conflicts in which internal shareholders misappropriate earnings

from minority or external shareholders. Therefore minority shareholders demand the payment of dividend (Myers, 2000). Countries with strong legal protection of minority shareholders use their rights to induce controlling shareholders for payment of dividend, but in countries where legal protection is weak, external shareholders cannot force the management for payment of dividend.

In finance and accounting, much research has been done on dividend policy and it is one of the important decision that manager must face. He must make a choice of how much of firm's profit must be distributed and how much of retained earnings are invested. Jensen (1986) mentioned in his study that conflict arises between managers and shareholders that how to use of internal funds.

Pakistan is an emerging economy. The corporate Governance is not successful here as compared to developed economies, most of the companies are controlled and owned by families and they held the top managerial positions. The managers take advantage of minority shareholders for the sake of their own ends. They retained earnings are used for investment opportunities instead of paying dividend (Shah et al., 2010) and after making investment free cash flows are not distribute it to shareholders.

Dividend Policy plays a significant role in investment and financing decision of a firm. This in turn can be used by management and shareholders to decrease agency cost. Success of management is measured by its ability to maximize wealth of shareholders and this cannot be achieved without fully understanding the dividend policy mechanism.

The study examine whether investment and leverage affect the dividend policy of the firm? In Pakistan Securities and Exchange Commission of Pakistan has implemented many changes in capital markets of Pakistan. There was no capital gain tax till 2010 but there is 10% withholding tax on dividend income. In Pakistan many investors prefer capital gains on investment over cash dividend. Investor's preference may be a factor that influences the dividend policy of the Pakistani firms.

To make financing operation in a firm, investment and dividend decision are critical and most important decision that affects the value of the firm. All these decisions require precise accuracy since they affect value of firm's stock. The fact is that if companies pay higher dividend, less amount is left for the entity to meet its debt obligations.

Investors invest in business for capital gains and Dividend. Setting an appropriate dividend policy is a critical task for management as it has a major influence on share price of the Firm and also influence the capital structure, asset pricing and capital budgeting. Therefore the Study analyzes and evaluates the impact of investment opportunities and Leverage in setting dividend policy of Pakistani Listed Firms.

Contribution of the study

Despite of the fact that many studies have been conducted on area of dividend payouts, many of these researches have been done on developed economies like USA and European countries, even some limited research are done in emerging and developing economy (Hananeh et al, 2013). In Pakistan past study has been done on different determinants of dividend policy like Size,

profitability, tax, leverage, and cash flows (Hashim, Shahid, Sajid & Umair,2013) but no comprehensive and significant study has been conducted on the impact of investment opportunity set and leverage on dividend policy to emerging Pakistan. Since the emerging markets perform different in setting dividend payout policy thus more study in this context could be valuable and establish the similarities and differences between the existing literatures and find out whether the findings of those studies is similar in Pakistan? The present study therefore aims to fill the research gap by **establishing whether investment opportunity set and leverage effect the dividend policy among the companies listed on Karachi stock exchange.**

1.4 Research question

This Study addresses the following research questions:

1. **"Do the Investment opportunity set affect the dividend policy in the context of listed companies of Karachi stock exchange"**
2. **"Do the Leverage affect the dividend policy in the context of listed companies of Karachi stock exchange"**

1.5 Objectives of the study

- The primary objective of the study is to empirically examine the impact of investment opportunity set on dividend policy in the context of listed firms of Karachi Stock Exchange.
- The second objective of the study is to empirically examine the impact of Leverage on dividend policy in the context of listed firms of Karachi Stock Exchange.

1.6 Significance of the study

Literature provide the several benefits of this study (Kallapur and Trombley(2001) ;Graham and Rogers (2002); Frank and Goyal, (2003)) as:

FOR PROSPECTIVE INVESTOR

This study can help investors to evaluate the performance of firm before making any decision of investment because rationale investor take decision on the basis of forecasted future performance of firms and current expected return on stocks of portfolio (Kallapur and Trombley, 2001).

This study can also be useful to aware investor in Pakistan that most of the companies are controlled and owned by families, board of directors who are non professional, elected on the basis of social relationship with shareholders. Thus people should have to take rational investment decision by taking into account facts and figures.

- **FOR EXISTING SHAREHOLDERS**

This study can help shareholders of the firm to ensure proper mechanism of awareness about the value and growth of the firm because when they have full awareness they will get reliable and accurate information about the performance of the company and they can safeguard their investment and in future they are able to decide whether to hold the investment or withdraw it.

- **FOR POLICY MAKERS**

Due to weak Corporate Governance the ownership structure of Pakistan firms is often characterized by the dominance of one primary owner who manages a large number of affiliated firms with just a small amount of shares or investment which results in the agency conflict between the shareholders and

the owner where controlling shareholders confiscate value from minority shareholders and can influence the Dividend Policy easily (Ahmed.H.,Javid.A.,2009) thus this study can help policy makers to make effective policies regarding dividend and investment and in their decision making process considers the interest of minority shareholders.

- **For Academia**

To study the investment, financing and dividend decision is significant for academia for supporting instructors, lecturers, future researchers and students by providing useful information for deeper understanding of knowledge. As, no comprehensive study has been done on the relationship of Investment, leverage and dividend policy in the context of Pakistan and major focus of published documents is to just measure the determinants of Dividend policy without providing proper evidence. This empirical as well as theoretical study will contribute and shed light on determining the impact of Investment opportunity set and Leverage on Dividend Policy in the context of listed firms of KSE.

1.7 Organization of the study

This study starts with introduction, the second chapter of this study elaborate literature on the relationship between investment opportunities and leverage with dividend policy. Then in third chapter this study presents methodology used in the study and gives a brief overview of the statistical tools used in this study. Fourth chapter explains the results and findings of the study and at last conclusion of the whole study is presented in chapter five.

CHAPTER 2

LITERATURE REVIEW

2.1 Investment opportunity set

To make decision regarding profitable and optimum investment is an indifferent and sensitive issue. These opportunities are considered invisible which doesn't take happen automatically rather they should be identified or created (Hansen & Chaplinky, 1993) and the company should increase its worth by identifying and investing in profitable investment opportunities whose rate of return is higher than market.

Investment opportunities play a vital role in corporate finance. The mix of assets in Place and investment opportunities have an effect on a firm's capital structure, the maturity and covenant Structure of its debt contracts, its dividend policy, its compensation contracts, and its accounting Policies (e.g., Smith and Watts 1992; Rajan and Zingales 1995; Billett, King and Mauer 2007).

As investment opportunities are usually not observed by outsiders, a universal practice is to rely on its proxy variables. The most usually used proxy variables for a firm's investment opportunity set are (1) the market-to-book equity ratio (MBE ratio), (2) the earnings-price ratio (EP ratio), and (3) the ratio of capital expenditures over the net book value of plant property and

Equipment (CAPX/PPE ratio).

Market-to-Book Equity Ratio

The most commonly used proxy for investment opportunities is the market to book value of equity (the MBE ratio). The market value of equity measures the present value of all future cash flows to equity holders, from both assets in place and future investment Opportunities, whereas the book value of equity represents the accumulated value generated from existing assets only. Therefore, the MBE ratio measures the mix of cash flows from assets in place and future investment opportunities.

Earnings-Price Ratio

Second most commonly used proxy of investment opportunities is the earnings-price ratio (EP ratio) or its inverse, the price-earnings ratio. Chung and Charoenwong (1991) suggest that a higher earning-price ratio shows that a large proportion of equity value is attributable to assets in place as compared to growth opportunities. This inference assumes that current earnings proxy for cash flows received from assets in place, while a firm's market value of equity reflects the present value of all future cash flows that is cash flows from assets in place and future investment opportunities.

Capital-Expenditures-to-Net-Plant-Property-and-Equipment Ratio

A third proxy used for investment opportunities is the ratio of a firm's capital expenditures divided by net plant property and equipment at the start of the period (the CAPX/PPE ratio). The motivation for this variable is that capital expenditures are highly discretionary and lead to the acquirement of new

investment opportunities. Firms that invest more achieve more Investment opportunities compare to their existing assets than those firms that invest less.

2.2 Dividend Policy

Dividend policy is a difficult issue which has always been arguable. The importance of this topic is not just limited to amount of money involved or recurring nature of dividend payout, instead firm's investment and financial policies has also a close relationship with dividend policy (Allen & Michaely, 1994). Several researchers in their studies incorporated that dividends are first choice for outside shareholders because they think that managers' use retained earnings to expropriate the earnings (Jensen, 1986; Myers, 2000). Laporta et al (2000) argued that in countries where there is weak investor protection, dividend is highly preferred.

Shareholders always look into the company's capability to initiate a dividend. Since dividend is share of shareholder in company's profit that's why it is not considered a business expense. It is paid on regular basis or called out anytime. Accordingly dividend policy is a set of rules and regulations a company used to decide that how much it will payout to its shareholders.

For shareholders who value profit certainty of a firm, a sound dividend has much importance. It means that for companies who has sound dividend policy have benchmark for doing well. Therefore dividend shows the overall performance of the company. Dividend policy is more beneficial to the companies having excess cash and few positive net present value projects. While the companies having several positive net present value projects but without excess cash will disrupt the undertaking of current projects.

There are several kinds of dividend policy. Like residual dividend policy, it's a method of distribution of income where dividends are paid to shareholders after all other capital requirements are met. The purpose of this type of dividend policy is to decide if there is sufficient money left over after all cost are met. Stable dividend policy is another type of dividend policy which is paid on regular basis. This creates assurance for investors that they will get regular income on their investment.

Literature gives the following six well known theories about dividend decision but this study is based on agency theory.

1 **Agency Theory (Jensen & Meckling, 1976)** describe that dividend is a mechanism that gives a motivation to manager to minimize the costs related with principal/agent relationship. If there is free cash flow available to the firm, dividend payment is valuable for shareholders to avoid overinvestment problem. Easterbrook (1984) explained that dividend payment decrease the overinvestment problem as it increase the tendency with which firms have to go to equity market and raise additional capital. This would minimize the agency cost.

2 **Irrelevance theory** of Miller and Modigliani (1961) which is also known as MM theory, suggest that dividend does not matter for the shareholder either they receive cash dividend or rise in share price because in perfect capital market dividend does not affect value of the firm.

3 **The Bird in the Hand Theory** of Gordon (1962) which explained that investor are risk averse, They always prefers cash today to avoid uncertain capital gains from future investment.

4 **Signaling theory** explained that dividend is used as a signal of future prospects of the firm to outsiders to avoid information asymmetry between managers and investors as managers only know the insider information that is not known to outsiders (Bhattacharya, 1980).

5 **Life cycle theory** suggest that before making any decision about dividend firm should take into consideration factors like the market imperfection, agency cost, floating cost, asymmetry information and life cycle (Fama and French, 2001; Lease et al, 2000).

6 **Catering theory** of Baker and Wurgler (2004) suggest that manager should cater the interest of investors by giving smooth dividends.

The Miller & Modigliani (1961) theory of irrelevance raised a lot of controversary on topic of dividend policy. They argued that in a perfect market where there are no taxes, transaction cost or information asymmetry, value of the firm has not been affected by dividend policy and the firm has no optimal dividend policy as well. According to this theory, when there is uncertainty dividend policy does not determine the value of the firm but the investment policy that really matters. Companies that have low level of earning but offer higher price those companies gain higher value from future expansion opportunities (Aretz & Bartram, 2010).

There are several reasons of significance of dividend policy. Firstly dividend is use as a mean for signaling the growth and stability prospects of the firm to outsider. Secondly, it plays a vital role in capital structure of the firm. Residual Dividend theory explains that when a firm has not any profitable investment

opportunity in that case it pays dividend (Miller & Modigliani, (1961); Linter, (1956); Smith & Watts, (1992)).

The signaling theory explains that dividend is a mechanism used by management to attract investors that indicates the profitability and performance of the company but at the same time investor consider it as a negative signal they think that there is a lack of investment opportunity or a growth option (Miller & Modigliani, 1961., Battacharya, 1979). But the main objective of all companies is to maximizing shareholders wealth for this many companies use dividend as a positive signal of current income that decrease free cash flow problems(Fairchild,2010.,Brealy & Myers,1996).

Pettit (1972) suggested that dividend paid to shareholders contain a lot of information about prediction of the firm. Raise in dividend consider as a good sign since management increase dividend only when he sure about the future prospects of the firm. This action of managers signals to the owner of the firm that managers are working on the best interest of the firm thus affect share price. Al-Malkawi further explained the dividend clientele effect to transaction cost and tax effect. He argued that investors who are on upper tax bracket prefer retained earnings on dividend while investors on lower tax bracket prefer dividend on retained earnings if there is uncertainty in future income. This idea is consistent with view that "A bird in hand is worth more than two in the bush" (Gordon, 1962).

Bhattacharya (1979) suggested in his signaling model that high quality firms pay higher dividend. Over again if signal rises with information asymmetry

between mangers and investors, firms having higher information disparities pay more dividends.

Recently life cycle theory of dividend is developed by many scholars (De Angelo et al., 2006; Fama & French, 2001; Grullon et al., 2002). The theory explains that mature and large firms that have few growth opportunities and high free cash flows are more likely to pay dividend than those young firms which have more growth opportunities with scarcity of resources.

Klein et al (2002) had given the idea of adverse selection that is as a result of information asymmetry. He argued that manager of the firm have complete information about the future prospects, growth and investment opportunities of the company as compared to outsiders that leads to agency cost. Companies which are controlled by shareholders prefer internal finance as compared to debt finance and outside capital to prevent mispricing losses (Noe & Rebello, 1996).

Another explanation why do firms pay dividend is given by Jensen (1986) free cash flow hypothesis that explain that dividend is a mean to alleviate agency cost. This hypothesis is based on the argument that there is divergence of interest between managers and shareholders. Instead of acting on best interest of shareholders, managers use the resources of firm to benefit themselves (Jensen & Meckling, 1976).Lang & Litzenberger (1989) were earliest to test the hypothesis of free cash flow. They test the reaction of stock market to dividend announcement of two groups of US firms, one group of firm were overinvesting and other were not. They found that firms which were overinvesting, the positive market reaction was stronger for these firms that

support the free cash flow hypothesis. The result was later confirmed by Gugler & Yurtoglu (2003) in German market.

Agency theory determines the significant and stable dividend. The higher the dividend, there will be less free cash flow and less chances of managers to spend on negative net present value projects. This maximizes the shareholders wealth and stock price of the firm will change as the dividend will change (Easterbrook, 1984). When corporate insiders retain higher free cash flow for their own benefit it will lead to agency conflicts between corporate insiders and outsiders, by paying dividends to shareholders this problem can eliminate by controlling the cash available to managers (Jensen, 1986).

Smith & Warner (1979) argued that those firms pay higher dividend which have low growth opportunities to avoid negative net present value projects, on the other hand firm pay less dividend which have high investment opportunities as they have less flexibility in their dividend policy and lower free cash flows. Another cause of paying lower dividend of these firms is to reduce their dependence on costly external finance (Gaver & Gaver, 1993).

Denis & Osobov (2008) study tendency to pay dividend in six financial developed markets (i.e., the UK, US, Canada, Germany, Japan and France) over a period of 1989-2002. Their results show that the probability of paying dividend in all six countries is strongly related to ratio of retained earnings to total equity. Their facts shows that collective dividend do not turn down over time as consistent with DeAngelo et al. (2006) but concentrated among profitable and largest firms, their findings were consistent with prediction of

life cycle theory that free cash flow distribution is main determinant of dividend policy.

The dividend policy in emerging market is different as compared to developed economies, and likely to be affected by several factors (Al-Kuwari, 2009; Glen et al, 1995). These factors include stock market volatility, asymmetry information and taxpaying procedure. Lower the tax rate on income higher the payout ratio (Casey & Dickens, 2000). Firms also maintain steady cash dividend policy in a regulatory environment. Those firms which have foreign ownership, higher earnings and greater size pay higher dividend (Al-Malkawi, 2007; Dickens et al, 2002; Eriotis, 2005). The consistent and higher dividend payment tends to a higher demand of its shares which results in higher the share price (Glen et al, 1995; Pettit, 1972; Watts, 1973). So to stay with this success firms are normally reluctant to diminish or miss out the dividend payouts (Saxena, 1999; Woolridge & Ghosh, 1985). The risk, ownership and investment ownership have negatively associated with dividend payouts while firm size is positively associated with dividend payouts (Dickens et al, 2002).

Naeem & Nasr (2007) examined the trends and determinants of dividend policies. Their results shows that Pakistani firms are either hesitant to pay dividend or low amount to be paid as a dividend and their present decision of dividend depend on prior year dividend and profitability ratio. Those firms which have higher net profit pay more dividends to the shareholders. Afza & Mirza (2010) study indicates that size, ownership structure, leverage and cash flow sensitivity are negatively associated with cash dividend, while profitability and operating cash flow are positively associated with cash dividend. Nazir, Nawaz, Anwar, & Ahmed (2010) examined the function of

dividend policy in Pakistan having a sample of 73 listed companies on Karachi stock exchange during the period of 2003 to 2008. Their results showed that dividend yield and dividend payout have significant impact on stock prices while leverage and size have negative insignificant affect.

2.3 INVESTMENT OPPORTUNITY SET AND DIVIDEND POLICY

Investment opportunities are profitable projects that the firm should discover and utilize them for economic rents (Myers, 1977). According to him value of a firm depends on the value of total assets in place and choices to make future discretionary investment in positive net present value projects. The firm value as a result of option to make future discretionary investment is referred as investment opportunity set by Myers (1977) and Smith & Watts (1992).

Investment opportunities play a significant role in corporate finance. The investment opportunities and assets in place affect capital structure of the firm, the covenants structure of firm's debt contracts, dividend policy, accounting policies and its compensation contracts (Smith & Watts, 1992; Rajan & Zingales, 1995; Billett, King & Mauer, 2007). Investment opportunities are the basic fundamentals of market value available to firm. Its basic assumption is to expand an existing production line or making capital expenditure to produce a new product (Kallapur & Trombley, 2001). Firm utilize investment opportunities for making economic rents because these are the profitable project of the firm (Myers, 1977). The value of investment opportunity set depends on how much future discretionary expenditures made by managers and these discretionary expenditures are made from internal funds of the firm

and if internal funds are insufficient then firm go for low risk debt (Triantis, 2000).

Agency cost theory and residual theory suggest that firms having high growth opportunities pay lower dividend then those firms which have less growth opportunities because these firms allocate funds on positive net present value projects rather paying dividends (Deshmukh, 2005). Several researchers found a significant negative relationship between dividend payout and growth opportunities (Collins et al, (1996); Zeng, (2003); Amidu & Abor, (2006); Gul, (1999) and Deshmukh, (2005)).

Investment opportunities have been affirmed a negative relationship with dividend decision. This relationship is supported by agency theory, because less free cash flow is left with the firm when a no of investment opportunities are available. For this reason firm keep more funds hence why the level of dividend payout is decreased (Easterbrook, 1984). Investment opportunity is a main determinant of dividend policy in emerging market. To invest in future investment projects firm keep funds that's why it has negatively related with dividend payout (Abor & Bokpin, 2010).

The worth of investment opportunity depends on the industry specific factors and firm specific factors. The most important determinants of investment opportunity set are industry factors that include product life cycle and barriers to entry. These factors enable firms to make investment that raise barrier to entry (Chung & Charoenwong, 1991).

Miller & Modigliani (1961) were the earliest to show in theory that in a perfect market investment and dividend are independent. Dhrymes & Kurz

(1967) provide the initial empirical evidence of the relationship between investment and dividend. They argued that investment and dividend are mutually dependent and that a steady dividend policy prevents investment due to reduction in internal capital while firms having residual dividend cut dividend to fulfill investment needs.

Various researchers (Smith & Watts 1992; Glen, 1995; Fama & French, 2002; Naceur et al, 2005 and Naeem & Nasr, 2007) in their study identify the negative relationship between investment opportunities and dividend payouts. They argued that firms having less investment plans have greater tendency to pay dividends.

Kallapur & Trombley (2001) argued that firms which have more profitable growth opportunities have higher share price though they might have low earnings. Firm's investment opportunity has an impact on dividend policy of the firm, the more the investment opportunity set of the firm more dividend payout ratio that result in increase of dividend yield (Abbott, 2001). But Smith & Watts (1992) had given different opinion they explained that firms prefer investment opportunities over dividend payout and used cash flows in investment rather to pay dividends (Jones & Sharma, 2001).

Jensen (1986) argued that the management value investment since manager's perquisites raise with investment even when companies invest in negative NPV projects. Accordingly when there is high cash flow managers invest in negative net present value projects instead of paying out dividend. He further explained that cash left over after making investment in positive net present value projects creates incentives to overinvest.

Rene M. Stulz (1990) explained in his study that inefficient investment of firm is due to information asymmetry between shareholders and mangers when there is less cash flows since managers cannot realistically motivate shareholders that cash flows are not sufficient to take the benefit of all positive net present value projects.

Gugler (2003) argued that shareholders affect the dividend policy of the firm regarding the investment opportunities. If investment opportunities available to firm shareholders prefer growth opportunities rather dividend, on the other hand if there is not any growth opportunities available to firm, shareholders pressurize managers to payout dividend so that managers could not use earning for self interest (Jensen,1986).

Sabramaniam et al (2011) had found negative relationship between investment opportunities and dividend policy. He argued that due to asymmetric information, investors perceived dividend payout as a negative signal; they think that there is a lack of investment opportunities available to firm. On the other hand firms that cuts the dividend, investor perceived it as a positive signal that free cash flows are available for undertaking an investment opportunity (Black,1976).

Miller & Modigliani (1961) theory explained that when a firm determined the optimal level of investment, those firm drop out dividend at first step. Though firms maintained stable dividend payouts instead of change it at each quarter (Lintner, 1956). Firms which have stable dividend policy maintained a good reputation and market value that's why manager apply the notion of smoothing hypothesis. Smoothing hypothesis hold the idea that managers are

hesitant to cut dividend when corporate earnings turn down therefore they carefully make changes to dividend payout policies (Base & Reddemann, 2011).

Jensen (1986) in his work explained the free cash flow problem. It is the surplus cash flow that remains left after all positive NPV projects have been undertaken. This theory explained that one way to overcome extra cash flow is to allocate it to the shareholders. So there is positive relationship between free cash flow and dividends are expected. Fenn & Liang (2001) came with same results that firm that have high free cash flow and few investment opportunities pay higher dividend. But some time managers do not distribute cash to shareholders instead they aim to expand firm size even by investing in negative NPV projects. Smith & Watts propose a solution to overcome this problem is implying the dividend protective role in order to minimize agency cost.

The research of Lintner's (1956) suggests that firm firstly decide on the dividend payout policy then determine the investment opportunity. When firms have shortage of cash then they reduce capital budget to keep or maintain dividends. Minton & Schrand (1999) also argued that when firms have short of cash they give up level of investment opportunities instead get hold of external capital. The CFOs survey of Brav et al (2005) suggests that "maintaining the dividend level is a priority on par with investment decision", and that managers are reluctant to cut dividend "except in extraordinary circumstances". While their facts indicates that investment decision are primary to dividend decision. The literature shows that dividend and

investment decision are interdependent and not separable but to some extent dividend decision is as important as investment decision.

Investment policies of banks have major impact on its dividend payout policy, those banks which have fewer investment plans have larger amount to distribute as dividend. Due to higher internal needs and investment opportunities various banks resist paying higher dividend. Hence why there is a negative association between investment opportunities and dividend payout (Fama & French, 2002; Glen et al., 1995; Naceur et al., 2005; Naeem & Nasr, 2007; Smith & Watts, 1992).

Micheal (1986) suggests that dividend is paid after making investment decision. Miller & Scholes (1978) theory of "Tax preference" explain that tax categorize investors into various clientele. Baker & Wurgler (2004) "catering theory of dividend" posits that managers are liable to give incentives to the investors according to their potential to cater them.

Mitton (2004) argued that there is strong negative relationship between growth opportunities and dividend payout in a country where rights of shareholders are well protected. These shareholders have expectation that firm prefer to retain cash so that they will gain good return from future investment though managers resist to cut dividend, but growth firms need additional funds in order to meet financing needs of growth opportunities, that's why earnings are retain and prefer investment over dividend payout (Amidu & Abor, 2006).

It is understood that firms with steady dividend policy have good reputation and value in market and that's why managers try to implement the notion of smoothing hypothesis that is earnings leads to dividends (Basse &

Reddemann, 2011). Several researchers found the negative relationship between investment opportunities and dividends (Mitton, 2004; Denis & Osobov, 2008; Kangarlouei et al, 2012). A small number found positive relationship between these variables (Kim & Jang, 2010). In general investment opportunities are likely to negatively affect dividend policy.

Thus the first hypothesis of this study is:

H1: There is a negative relationship between investment opportunity set and dividend payout.

2.4 LEVERAGE AND DIVIDEND PAYOUT

Financing decision is one of the important decisions taken by management of the company in order to maximize the wealth of shareholders. This sort of decision making is related to capital structure and determines the best method of financing. That's why financial manager can affect the wealth of shareholders by changing the dividend each year, dividend policy, profitability, risk and method of financing.

Miller & Modigliani (1961) were the earliest scholars who given the idea that in a perfect capital market there is no any relationship between firm's value and the manner its assets are financed. They suggest that growth rate of dividend per share and growth rate of firm is not same except for internal financing. Miller & Modigliani (1961) theory of irrelevance suggest that in a perfect capital market where asymmetric information is not exist, under a given investment decision, firm value is not affected by financing decision

hence why firm value or share holder wealth is independent from dividend payout decision.

Financial leverage is said to play a significant role in minimizing agency cost that arises due to conflict of interest between shareholders and managers and is supposed to play a significant role of monitoring managers (Jensen & Meckling, 1976; Jensen, 1986; stulz, 1988). Debt is likely to affect dividend decisions since debt covenants and related restrictions may be imposed by debt holders as well as firms with high financial leverage tend to avoid paying dividend hence why they can compensate risk linked with the use of debt finance (Farinha, 2003).

Collins et al. (1996), Easterbrook (1984) and Rozeff (1982) extending the agency theory that firms pay dividend and at the same time raise capital. Easterbrook (1984) argued that paying high dividend increases the probability that additional capital will have to be raised on a periodic basis.

Agency theory of Jensen & Meckling (1976) explained that firms that use more debt financing reduce equity agency cost. Total equity financing is reduced by using more debt financing that minimize the scope of manager-stockholder conflict .but on the other hand debt financing arise the conflict of interest between debt holders and stock holders.

Free cash flow theory by Jensen (1986) explained the benefit of using debt financing in minimizing the agency cost of free cash flows. He argued that leverage reduces the free cash flow problem as the firm has to pay the interest to creditors. Hence why it can be regarded as a sign of bonding costs borne by agents. The results of Von Eije & Megginson (2006) and Manos (2003) found

that higher the leverage of the firm less a dividend has been paid to shareholders and these results best described the agency theory.

Rozeff (1982) found a negative relationship between leverage and dividend who argued that a firm having more financial leverage use lower dividend payout policy to reduce the cost of external financing.

Literature found negative impact of Leverage on dividend policy (Johnson, 1992; Almalkawi, 2005). These researchers have shown that firms with more leverage retained the internal cash flows rather distribute it between shareholders since high leverage firms experience high financial cost for getting finance for this firms have to keep its internal financial resources to fulfill the claims of creditors rather than distribute between shareholders as a dividend.

Wang (2010) argued that in imperfect capital market where asymmetric information exists, agency and transaction cost, taxes and assets are not perfectly divisible; it is possible that there exist a relationship between investment decision and a firm financial structure. Thus market imperfection has major impact on financing and investment decision (Peterson & Benesh, 1983).

Green (1993) examined the relationship between investment and financing decision and dividend payout. He found that dividend payout decision cannot be decided fully until financing and investment decision will be decided. It is taken along with financing and investment decision. Higgins (1981) examined a relation between growth and financing needs of the firm. He found that growing firms have more external financing needs.

Higgins (1972) and McCabe et al (1979) suggest that Leverage have an impact on the dividend policy of the firm. Firm with high leverage is more risky in the cash flows. Literature found negative relationship of Leverage and dividend payout. Firms with high leverage pay fewer dividends to meet debt obligation. The study of Adjaoud (1986) showed that dividend paying firms of Canada strive to maintain steady dividend per share and hesitant to minimize the payout level. These firms adjust the dividend payout based on their expected future earnings.

Ross (1977) examines the relationship between firm quality and leverage in his signaling model. He argued that issuing debt is a signal of high quality since the firms which have favorable prospects of the firm issue debt. That's why high quality firms prefer higher leverage. Maksimovic & Titman (1991) found negative relationship between leverage and quality of the firm. They give a model in which firm's investment is undertaken in product quality of their firm to create a "Reputation capital" that allow firm to charge high prices in the future. High level of leverage increases the chances of future bankruptcy; these high leveraged firms minimize the quality in order to payback to lenders and to sustain cash flows. In the language of authors, this approach of the authors is corresponding to "obtaining an involuntary loan from consumers, since the reduction in future revenues resulting from the loss or reputation corresponds to the repayment" (Maksimovic & Titman, 1991, page.117).

Brigham (1995) argued that dividend give the best and most consistent signal. He further explained that dividend increase management confidence that firm's future earnings will be good enough to sustain higher dividend and vice

versa. This view is consistent with Foong et al, (2007) whose evidence supports the idea that investors react to dividend changes. Fama & Babiak (1968) established a time series between earnings and annual dividend that is corroborated with the view that firms which pay dividend increase their dividend only when managers are relatively certain that their higher earnings can be maintained.

Based on capital structure signaling model, it is predicted that higher value firms would have more financial leverage (Klein et al, 2002). In the existence of asymmetric information, when equity is underpriced retained earnings and debt financing is better option of financing instead of as issuing new equity (Miller & Modigliani, 1961). Though dividend payout has negative impact on investment opportunity while external financing would have positive impact on investment since it raises the funds available for investment purpose (McCabe, 1979).

The general supposition in analyzing dividend policy is that through external financing firms meet the financial needs of current and future investment. Firms have to cut dividend payout that go through long term debt. Jensen (1985) argued that financial leverage has a major impact on minimizing agency cost in a corporation.

Long & Malitz examined the negative impact of leverage on quality. They suggested that firm investment on non tangible assets such as R & D and advertisement lead to agency problems as lenders think that it's most difficult to observe how managers utilize the resources. Hence why firm that is prone to more debt finance have a relatively disadvantage undertaking investment in

intangible assets. These researchers have empirical evidence by analyzing financing and investment pattern of US firms. They argued that underinvestment due to debt financing affects activities related to quality improvement or perception of consumers regarding product quality. However Ross (1977) come up with another view that "good quality" firm issue more debt than "low quality" firm. As there is a chance of default due to servicing cost of debt that indicates a pricey outcome for firm insiders. Hence why debt is consider as a credible signal that shows good quality of the firm and these firms issue more debt and due to having more profitable investment, raise more debt.

Rene M.Stulz (1990) study showed that debt finance force management to payout cash as dividend thus reduces investment. Shareholders wealth is affected by debt finance both positively by reducing investment and paying as dividend and negatively by making investment and cut dividend payout.

According to financing policy of the firm, companies having major growth opportunities are likely to have lower debt/equity ratios since potential underinvestment problem due to risky debt is controlled by equity financing (Myers (1977). Growth firms are likely to follow a low dividend payout policy because dividends and investment are connected through cash flow identity of firm (Myers, 1977).

Several researchers argued that financial leverage has a significant contribution in monitoring managers hence minimizing agency cost that arise due to conflict of shareholder and manager (Jensen & Meckling, 1976; Jensen (1986) and Stulz (1988)). Hafeez & Attiya (2009) examined the determinants

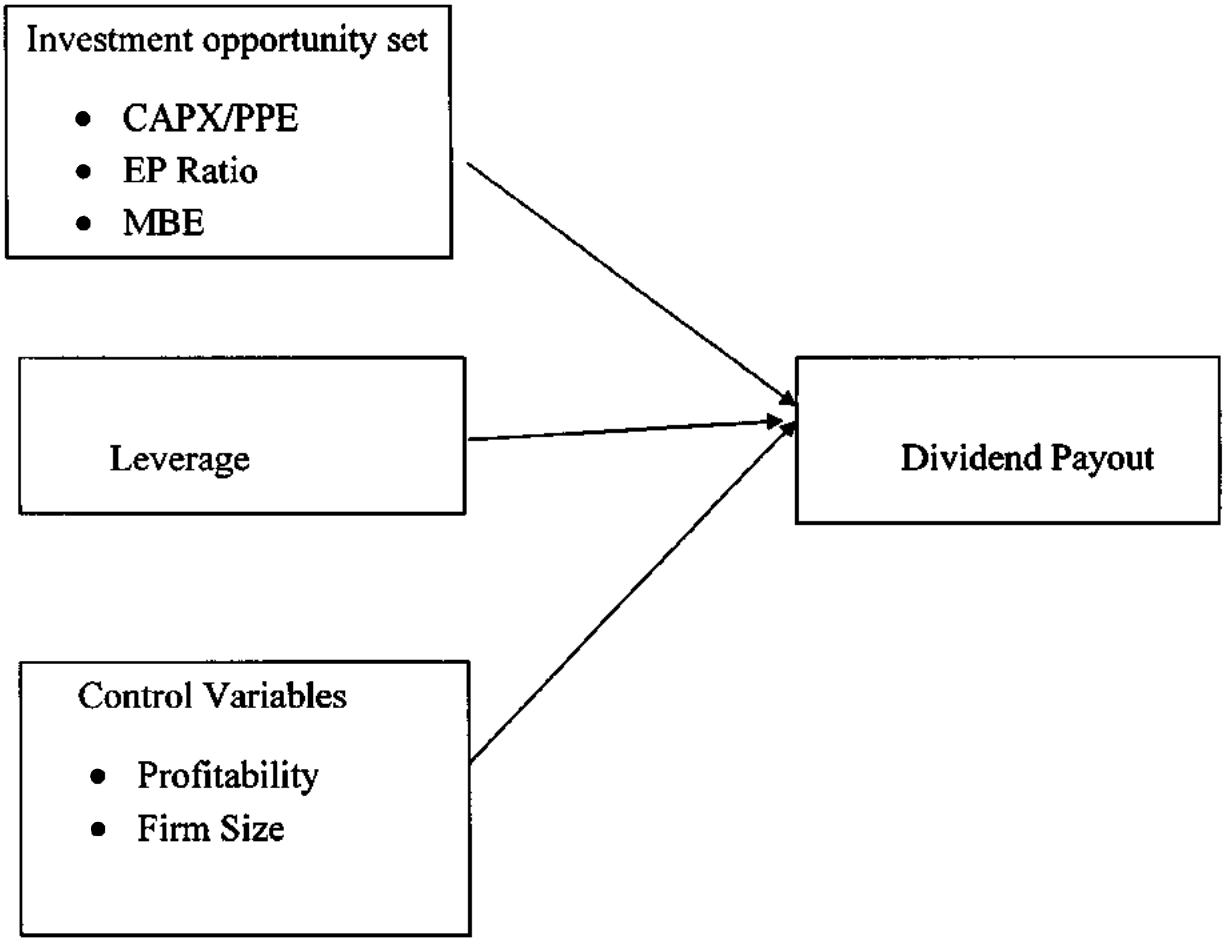
of dividend payout policy of 320 non-financial firms listed at Karachi stock exchange from the period of 2001 to 2006 by applying Lintner (1956) model. Their results shows that dividend policy of non financial firms listed at Karachi stock exchange depends upon their current earnings per share and past dividend per share. They further explained that firms having stable earnings and profitability pay higher dividend and that market liquidity and ownership structure have positive effect on dividend payout policy and practices whereas leverage and investment opportunities have negative impact on dividend payout ratio. Jaonnos & Filippas (1997) examined the dividend payment practices of 34 companies listed at Athens stock exchange from the period of 1972 to 1988, their results indicate that Greek companies adopt Lintner model in making dividend policy for the firms.

Thus we posit following hypothesis

H2: There is a negative relationship between leverage and dividend payout.

2.5 Theoretical Model

To investigate the impact of investment opportunity set and Leverage on dividend payout, following regression model of Hananeh et al, 2013 is used.



CHAPTER 3

Methodology

3.1 Research Design

This is an empirical study and it employs the following Research design.

SOURCES OF DATA

Secondary sources are used for the measurement of variables used in this study, which is given below.

- Analysis reports of State Bank of Pakistan
- Analysis reports of Karachi Stock Exchange
- Firm's Annual reports
- Business Recorder Website.

POPULATION AND SAMPLE

All listed Companies are the population of the study. The present study focuses on non-financial sector and excluded financial sector because financial reporting standards of financial firm is different from non-financial firms.

Sample

The study includes total of 200 companies from different sectors for the period of 2006-2012. However the study excludes some firms due to non availability of data and some firms are excluded which do not pay regular dividend. So as

a whole the study consist of sample of 93 companies. The nature of data for present study is panel data. Availability of data is key concern here so sample excludes the companies for which data is not available and financial companies such as banks and insurance companies because of the difference in their capital structure and profits from other non financial companies.

Method of data collection is secondary. This study used secondary data to accomplish research because the data on dividend payout, earnings, book value of equity, and capital expenditures is calculated from annual reports.

3.2 MODEL SPECIFICATION

To investigate the impact of investment opportunity set and Leverage on dividend payout, following regression model of Hanenah et al (2013) is used.

$$DP_{it}=\alpha_o+\beta_1 CAPX\text{-}PPE_{it}+\beta_2 Lev_{it}+\beta_3 Size_{it}+\beta_4 Prof_{it}+\varepsilon_{it} \quad (1)$$

$$DP_{it}=\alpha_o+\beta_1 EP_{it}+\beta_2 Lev_{it}+\beta_3 Size_{it}+\beta_4 Prof_{it}+\varepsilon_{it} \quad (2)$$

$$DP_{it}=\alpha_o+\beta_1 MBE_{it}+\beta_2 Lev_{it}+\beta_3 Size_{it}+\beta_4 Prof_{it}+\varepsilon_{it} \quad (3)$$

DP = dividend payout

IO = investment opportunity

LEV = leverage

PRO = profitability which is used a control variable in this study.

Firm Size = control variable of this study

3.3 VARIABLES

Following are variables used in this study.

3.3.1 Dependent variable

Dividend payout is dependent variable used in this study. It is defined as a portion of net earnings of a firm which is distributed among shareholders (Khan & Jain, 2007, p. 19.3)

It is measured by dividing dividend per share by earnings per share. Dividend payout gives good insight about the performance of the company to the shareholders, its earnings and how much of it has given to shareholders.

3.3.2 Independent variables

The independent variables of the study are Investment opportunity set and leverage

3.3.2.1 Investment opportunity set

It is refer to the present and future growth opportunities that are available to firm. Investment opportunity set will be measured by the following proxy variables used by chung and charoenwong (1991), Collin and Kothari (1989) and Grahams and Rogers (2002).

- **Market to book equity ratio (MBE):** A measure of investment opportunities is the market to book equity ratio which is measured by market value of equity divided by book value of equity (collin and Kothari).
- **Earning-price ratio (EP):** Earning price ratio is 2nd commonly used proxy to measure investment opportunities. Higher earning price ratio indicates that

larger proportion of equity value is attributable to asset in place as compared to growth opportunities (Chung & Charoenwong, 1991).

- **Capital-Expenditure to Net Plant-Property and Equipment ratio:** A 3rd proxy to measure investment opportunities is capital expenditure to net plant property and equipment ratio which is measured by dividing firm's capital expenditures by net plant property and equipment. (Skinner 1993).

3.3.2.2 Leverage

Leverage is the amount of debt used to finance firm's assets. Firm that has more debt is considered to be highly leverage firm.

Rajan and Zingales(1995) defined leverage as "the ratio of total debt to total assets". This study used leverage as defined by Rajan and Zingales(1995).

Leverage= Total Debt/Total Assets

3.4 CONTROL VARIABLES

There are two control variables used in this study.

1. Profitability

2. Firm Size

3.4.1 Profitability

It is defined as ability of a firm to produce profits and it is used to determine the firm performance. It is a main indicator of announcement of dividend (Mistry, 2011).

In order to measure profitability of the firm return on asset will be used as proxy in this study which is calculated by dividing EBIT to total assets.

In deciding company's payout policy, management always considers the present and historical profits (Pruitt & Gitman, 1991). The expected earnings of the company have also influence dividend payout (Baker et al., 1985). Profitability is also a main factor in determining the dividend payout of the company.

3.4.2 Firm Size

Firm size influences the dividend payout. It is a control variable used in this study. It is measured by taking natural log of total assets.

3.5 STATISTICAL TOOLS

The study used different statistical tools to check the impact of investment opportunity set and Leverage on dividend payout. The study used multiple regressions analysis, generalized method of moment, descriptive statistic, and correlation analysis and fixed effect estimation.

Descriptive Statistic: Descriptive statistics include Mean, Median, Maximum, and Minimum, Skewness, Standard deviation (Level of risk), Variance, Kurtosis and Beta values. It tells us about the performance of time series.

Correlation: Correlation measures the degree of association among two variables that how two variable move in relation to each other. There may be no correlation, positive correlation and negative correlation.

Correlation is measured on the basis of correlation coefficient that range between +1 and -1. Perfect positive correlation implies that if one variable moves either up or down other variable also moves in the same direction, but in case of negative correlation one variable moves in opposite direction to other variable.

Ordinary Least Square Regression: Ordinary least square regression (OLS) is used to apply the multivariate regression. However to check the validity of the results of ordinary least square regression (OLS) multiple assumptions are used in the study. These assumptions are Linearity, homoscedasticity and multicollinearity.

Chapter 4

Results and Discussion

This study used descriptive statistic, correlation, ordinary least square method and fixed effect model. The tables are given below.

Table 4.1: Descriptive Statistics

Descriptive statistics include Mean, Median, Maximum, and Minimum, Skewness, Standard deviation (Level of risk), Variance, and Kurtosis values. It tells us about the performance of time series

Table 1. Descriptive statistics of dependent, independent and control variables

Variables	Mean	Median	Min	Max	SD	Skewness	Kurtosis	Probability	Observations
Dividend Payout	0.40	0.339	-2.43	3.07	0.42	1.52	15.18	0.0000	665
CAPX/ PPE ratio	0.10	0.131	-23.9	2.18	1.05	-18.90	420.4	0.0000	665
EP ratio	0.20	0.138	-0.96	10.77	0.48	16.20	344	0.0000	665
MBE ratio	2.98	1.222	0.01	15.07	8.77	8.56	93.64	0.0000	665
Leverage	0.49	0.516	0.037	1	0.20	-0.13	2.04	0.0000	665
Profitability	0.17	0.147	-0.18	0.60	0.10	0.98	4.30	0.0000	665
Firm Size	15.53	15.42	0.28	19.66	1.63	-0.90	13.36	0.0000	665

Table 1 shows the descriptive statistics of the dependent, independent and control variables of the study. The sample covers 93 listed non financial firms of Pakistan over the period of 2006 to 2012. The mean, standard deviation, minimum and maximum of each variable of the study is presented in table. Dividend payout which is the dependent variable of the study has mean value of 0.40. It shows that average dividend payout for sample companies of the study has been 40%. SD of 0.42 implies the variation for the time period in dependent variable of the study that is changed from -2.43 to 3.07. Investment Opportunity Set which is measured by Market to book value of equity, earning price ratio and capital expenditure to net book value of property, plant and equipment ratio. The mean value of capital expenditure to book value of net plant, property and equipment ratio is 0.10 with standard deviation 1.05. The mean value of earning price ratio is 0.20 with standard deviation 0.40. The mean value of market to book value of equity is 2.98 with standard deviation 8.77. Leverage which is measured by total debt to total asset has a mean value of 49% with standard deviation of 0.20 and it has been varied from 0.037 to 1 for 95 listed companies under investigation in this study. Profitability is used as a control variable in this study that is measure by net earnings before interest and taxes divided by total assets. It has a mean value of 0.17 with standard deviation 0.10 that varies from -0.18 to 0.60. Firm size is also used as a control variable in this study. It has a mean value of 15.53 with standard deviation 1.63 that varies from 0.28 to 19.66.

Skewness tells us about the shape of distribution. If the values lies on left side of the mean, they are negative skewed. If they lies on right side they are

positive skewed. The above table demonstrates the skewness information of variables under investigation. Above table shows that dividend payout, EP Ratio, MBE Ratio and profitability are positively skewed, while CAPX/PPE Ratio, Leverage and Firm Size are negatively skewed.

Kurtosis measures whether the data is peaked or flat relative to its normal distribution. Data that has high kurtosis tend to have distinct peak near the mean with heavy (larger) tail. While data that have low kurtosis tend to have flat top near the mean. Table 1 show that distribution of data is leptokurtic as the kurtosis value is large positive and the values are greater than 3 having higher peak and longer tails.

Table 4.2: Correlation

Correlation measures the degree of association among two variables that how two variable move in relation to each other. There may be no correlation, positive correlation and negative correlation.

Correlation is measured on the basis of correlation coefficient that range between +1 and -1. Perfect positive correlation implies that if one variable moves either up or down other variable also moves in the same direction, but in case of negative correlation one variable moves in opposite direction to other variable.

Table 2. Correlation matrix of independent, dependent and control variables.

	DP	CAPX/PPE	EP	MBE	LEV	PROF	FZ
DP	1						
CAPX	0.01	1					
EP	-0.07	-0.05	1				
MBE	0.23	0.02	-0.08	1			
LEV	-0.05	0.06	-0.0009	0.12	1		
PROF	0.21	-0.10	0.061	0.32	-0.29	1	
FZ	0.06	0.01	0.04	0.01	0.24	0.03	1

Table 2 describes the correlation among variables under investigation. Correlation is a statistical technique to find how one variable move in relation with other variable. Values of correlation always lie between +1.0 to -1.0. Perfect positive correlation (+1) implies that one variable moves either up or down, other variable moves in the same direction, while in perfect negative correlation(-0.1) implies that two variable move in opposite direction. It is found that CAPX/PPE and Firm Size has weak correlation with dividend payout having 0.01and 0.06 respectively. EP ratio and leverage have negative weak correlation with dividend payout having -0.07and -0.05 respectively. However association of MBE and profitability with dividend payout is moderately strong contrary to other variables having 0.23 and 0.21 respectively.

Investment opportunity set which is measured by its proxy variables i.e CAPX/PPE ratio, EP ratio and MBE ratio. CAPX/PPE shows negative correlation with EP ratio and profitability, while it shows weak positive correlation with MBE, Leverage and Firm Size having 0.02, 0.06 and 0.01 respectively.

EP ratio shows negative weak correlation with MBE and Leverage having -0.08 and -0.0009 respectively while it shows positive weak correlation with Profitability and Firm Size having 0.06 and 0.04 respectively.

3rd proxy of Investment opportunity set is MBE ratio. It shows positive correlation with Leverage, profitability and Firm Size.

Leverage shows negative correlation with Profitability while moderately strong correlation with Firm size -0.29 and 0.24 respectively.

Profitability shows positive but weak correlation with firm size having 0.03 coefficients.

Table 4.3.1 Regression Analysis (OLS Method)

In order to determine the relationship between dependent and independent variables, ordinary least square method is applied.

The regression analysis is applied for the following first equation

$$DP_{it}=\alpha_o+\beta_1 CAPX\text{-}PPE_{it}+\beta_2 Lev_{it}+\beta_3 Size_{it}+\beta_4 Prof_{it}+\varepsilon_{it}$$

Table 3. OLS Method

	coefficient	Std.Error	t-ratio	p-value
Const	0.04	0.15	0.30	0.7
CAPX-PPE	0.01	0.01	0.9	0.34
Lev	-0.003	0.084	-0.03	0.96
Prof	0.85	0.15	5.4	0.00001
Size	0.013	0.01	1.34	0.17

R-Squared	Adjusted R-Squared	F-Value	Durbin Watson
0.05	0.04	9.07	1.22

The above table shows that two proxy of Investment opportunity set which is capital expenditure to book value of plant property and equipment does not show any significant relationship with dividend payout. So no matter the amount of capital expenditure to net plant property and equipment in the companies it does not affect the dividend paying decision. This is because several companies that have more growth opportunities in the form of capital expenditure to net plant property and equipment but can still pay dividend because those firms have good reputation so those firms can easily get loan for

an investment. The results are contrast to the free cash flow theory of Smith and Watts (1992) that managers of the firm with few investment opportunities and high free cash flow pay out more dividends since they have fewer growth opportunities to invest in positive NPV projects. While firms with more investment opportunities pay fewer dividends since these firms need the cash for investment opportunities. However this study come up with different result that capital expenditure to net book value of plant property and equipment has no affect on dividend payout which are consistent with the findings of Musa(2009) who said that Investment opportunity have no any effect on dividend policy.

Leverage also shows negative but insignificant relationship with dividend payout. The p value for Leverage is 0.96 it means that there is no significant relationship between Leverage and dividend payout.

The above results show a highly significant relationship between profitability and dividend payout. P value is 0.00001 and regression coefficient is 0.85 which indicates that by one percent increase in profitability leads to 85% increase in dividend payout.

The p value (0.17) indicates that there is no significant relationship between firm size and dividend payout. Large firms mainly focus on retention and utilize funds to meet financial needs instead of disbursing as dividend.

The value of R-squared is 0.05 which indicates that 5% variation in dependent variable is explained by independent variables. The F value is 9.07 that is significant. Durbin Watson is 1.22 that is near to 2. It means that there is no autocorrelation.

On the basis of following diagnostic test values fixed effect model is recommend for the first equation.

Null Hypothesis: the group has common intercept

Test Statistic: F (94,566) = 2.41113

With P value = P (F (94,566)>2.41113=2.70894

Hausman test

Null Hypothesis: GLS estimates are consistent

Asymptotic test statistic: Chi square =14.76

With p- value = 0.0052158

Table 4.3.2 Fixed Effect Method

On the basis of above mentioned diagnostic values and housman test values fixed effect model is recommended for the first equation.

Table 4. Fixed effect model

	coefficient	Std.Error	T-ratio	P-Value
Const	0.72	0.35	2.02	0.04
CAPX_PPE	0.008	0.015	0.57	0.56
Lev	-0.2	0.17	-1.1	0.25
Prof	-0.002	0.24	-0.008	0.993
Size	-0.01	0.02	-0.6	0.54

R-Squared	Adjusted R-Squared	F-Value	Durbin Watson
0.32	0.20	2.75	1.67

The above given table shows that the proxy of investment opportunity that capital expenditure to book value of plant property and equipment ratio has no significant relationship with dividend payout. P value is 0.56 which shows insignificant relationship.

Regression coefficient of Leverage is -0.2 and p value is 0.25. it indicates that there is negative but insignificant relationship between leverage and dividend payout.

Profitability and firm are used as control variables in the study. P value shows that both have insignificant relationship with dividend payout.

The above given table shows that value of R-Squared is 0.32 which indicates that 32% variation in dependent variable is explained by independent variables. F value is 2.75 which is significant and Durbin Watson is 1.67 that is near to 2, it means there is no autocorrelation problem.

Table: 4.4.1 Regression Analysis (OLS Method)

The ordinary least square method is applied for the following second equation of the study.

$DP_{it}=\alpha_o+\beta_1 EP_{it}+\beta_2 Lev_{it}+\beta_3 Size_{it}+\beta_4 Prof_{it}+\varepsilon_i$

Table 5. OLS Method

	Coefficient	Std.error	t-ratio	P value
const	0.04	0.15	0.2	0.78
EPR	-0.08	0.03	-2.4	0.01
Lev	0.0001	0.08	0.0015	0.99
Prof	0.86	0.15	5.58	0.00001
Size	0.014	0.01	1.46	0.14

R-Squared	Adjusted R-Squared	F-Value	Durbin Watson
0.059	0.053	10.37	1.2

The regression coefficient of earning price ratio is -0.08, it means that 1 percent increase in earning price ratio leads to 8 percent decrease in dividend payout. The relationship between earning price ratio and dividend payout is statistically significant but negative relationship. It means that firms with more investment opportunities it disburse less dividend to share holders. A negative EP ratio indicates that companies have lower expected annual earnings growth that's why these firms disburse low dividends to shareholders.

Leverage has insignificant relationship with dividend payout. P value is 0.99 which shows insignificant relationship between leverage and dividend payout. It indicates that dividend decision is taken as independent decision on corporate financial policy.

Firm size and profitability are used as control variables in the study. P value of profitability is 0.00001 which shows highly significant relationship of

profitability with dividend payout. Regression coefficient is 0.86 which means that one percent increase in profitability leads to 86% percent increase in dividend payout. Firm size shows insignificant relationship with dividend payout.

R-Squared is 0.05 which shows 5% variation in dependent variable is explained by independent variables. F value is 10 which is significant. Durbin Watson is 1.2 which indicates there is no auto correlation problem.

On the basis of basis of following diagnostic test values fixed effect model is recommended for the 2nd equation.

Null Hypothesis: the groups have common intercept

Test Statistic: F (94,566) = 2.34431

With p value = P (F(94,566)>2.34431) = 1.0379

Hausman Test

Null Hypothesis: GLS estimates are consistent

Asymptotic test statistic: Chi-square (4) = 23.29

With p-value = 0.0001105

Table: 4.4:2 Fixed Effect Model

After diagnostic test fixed effect model is recommended for the 2nd equation.

Table 6. Fixed Effect Model.

	Coefficient	Std.Error	t-ratio	P-value
const	0.73	0.35	2.06	0.03
EPR	0.007	0.03	0.21	0.82
Lev	-0.19	0.17	-1.11	0.26
Prof	-0.03	0.24	-0.13	0.89
Size	-0.014	0.022	-0.6	0.5
R-Squared	Adjusted R-Squared	F-value	Durbin Watson	
0.32	0.20	2.7	1.68	

The above given table indicates that 2nd proxy of investment opportunity set which is earning price ratio shows insignificant relationship with dividend payout. It suggests that dividend decision is independent decision taken on firm investment policy in case of Pakistani market. So whatever the firm has earning yield it does not affect the dividend paying decision. So the first hypothesis rejected here that there is a negative relationship between investment opportunities and dividend payout.

The above results indicate that leverage has no significant relationship with dividend payout. P value is 0.26 which is insignificant. This is because of the conflicting of interest between debt holders and shareholders. In fact shareholders have right to take actions to benefit themselves at the expense of

debt holders (Jensen and Meckling, 1976). So whatever the amount of Debt Company owes it distribute dividend to shareholders to avoid agency conflicts. So the 2nd hypothesis is rejected here that leverage has negative relationship with dividend payout.

Profitability and Firm size which are control variables of the study also shows insignificant relationship with dividend payout.

R-Squared is 0.32 which indicates that 32% variation in dividend payout is explained by independent variables. F value is 2.7 which is statistically significant. Durbin Watson is 1.68 which indicates there is no auto correlation problem.

Table 4.5.1 **Regression Analysis (OLS Method)**

The ordinary least square regression method is applied for 3rd equation of the study

$$DP_{it}=\alpha_o+\beta_1 MBE_{it}+\beta_2 Lev_{it}+\beta_3 Size_{it}+\beta_4 Prof_{it}+\varepsilon_{it}$$

Table 7. OLS Method

	coefficient	Std.error	t-ratio	p-value
constant	0.06	0.15	0.42	0.67
MBE	0.012	0.002	5.33	0.00001
Lev	-0.12	0.08	-1.4	0.15
Prof	0.49	0.16	2.9	0.003
Size	0.01	0.009	1.8	0.06

R-Squared	Adjusted R-Squared	F-value	Durbin Watson
0.09	0.08	16	1.2

The regression coefficient for market to book equity ratio is 0.012 and p value is less than 0.01 which is statistically significant but positive. It means that only 1% percent variation in dividend payout is explained by market to book equity ratio. The p value for Leverage is 0.15 it means that there is no significant relationship between Leverage and dividend payout. Miller & Modigliani (1961) were the earliest scholars who given the idea that in a perfect capital market there is no any relationship between firm's value and the manner its assets are financed. They suggest that growth rate of dividend per share and growth rate of firm is not same except for internal financing. Miller & Modigliani (1961) theory of irrelevance suggest that in a perfect capital market where asymmetric information is not exist, under a given investment decision, firm value is not affected by financing decision hence why firm value or share holder wealth is independent from dividend payout decision.

The firm size has significant and positive relationship with dividend payout i.e. that p value is less than 0.01. The regression coefficient is 0.01 for firm size that explains 1 percent variation in dividend payout is explained by this variable. Large firm pay dividend due to availability of free cash flows. The relationship between profitability and dividend payout is statistically significant ($p<0.01$) and positive. The regression coefficient is 0.49 for profitability that explains 49 percent variation in dividend payout is explained by profitability. It determines the performance of the firm. Theories of finance suggest that profitability and dividend are positively related. Same results are found by other studies that profitable firms pay more dividends (Baker et al.,

Kim & Jang, 2010). In Pakistan most of the companies are hesitant to payout dividend as they focus on high retention and funds are reinvested in business instead of disbursing them to shareholders (Asif et. 2011).

The results indicate that R-Squared is 9% which explains that only 9% variation in dividend payout is explained by independent variables. The value of Durbin Watson is near to 2 indicates non-auto correlation.

After applying diagnostic test, it decides that fixed effect test better describes the model. It rejects the null hypothesis that the groups have common intercept and go for fixed effect model.

The results are given below

Null Hypothesis: the groups have common intercept

Test Statistic: F (94,566) = 2.0976

With p value = P (F (94,566)>2.0976) = 1.28061

Hausman test

Null Hypothesis: GLS estimates are consistent

Asymptotic Test Static: Chi square (4) = 9.15

With p-value = 0.0572706

Table 4.5.2 Fixed Effect Model

On the basis of above mentioned diagnostic values and Hausman test values fixed effect model is recommend for 3rd equation.

Table 8. Fixed Effect Model

Variables	Coefficient	Std.Error	t-ratio	P-Value
Const	0.70	0.35	2.04	0.04
MBE	0.006	0.004	1.4	0.15
Lev	-0.20	0.17	-1.14	0.25
Prof	-0.04	0.24	-0.16	0.87
SZ	-0.013	0.02	-0.59	0.55

R-Squared	Adjusted R-Squared	F-Value	Durbin Watson
0.32	0.20	2.7	1.67

On testing the hypothesis results indicates that there is insignificant relationship between market to book equity and dividend payout. The regression coefficient of Investment opportunities was found to be insignificant.

The results indicate that coefficient of Leverage is negative but insignificant Profitability and size of firm is used as control variables in this study. Results indicate that both variables show negative but insignificant relationship with dividend payout.

Results show that value of R-Squared is 0.32 which suggest that 32 percent variation in dividend payout is explained by independent variables. Durbin Watson is 1.67 which shows there is no auto correlation problem.

Table 4.5.3 Generalized method of moment

As all results shows insignificant relationship of independent and dependent variable so I apply generalized method of Moments and the results are given below in table.

Table 9 Generalized Method of Moments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.968	3.438	-0.281	0.778
CAPX_PPE_RATIO	-0.178***	0.053	3.357	0.0008
EP_RATIO	-4.910***	1.617	3.035	0.002
MBE_RATIO	-0.132**	0.077	1.915	0.086
LEV	-2.522**	1.381	1.925	0.068
FIRM SIZE	1.033	1.007	0.945	0.173
PROFITABILITY	0.967***	1.897	1.992	0.043
R-squared	39.835			
Adjusted R-squared	40.095			
Durbin-Watson stat	1.385			
J-statistic	2.73E-41			

Note: This table presents the results for the Generalized Method of Moments method. The dependent variable is the DP Ratio (*measure of dividend policy*). Furthermore, *** and ** denotes that the coefficient is statistically significant 5% and 10% respectively.

The results show that the all proxies of Investment opportunity set shows significant but negative relationship with dividend payout. This means that there is a negative relationship between investment opportunities and dividend payout. The results are according to passive residual theory of dividend that firm will only pay dividends from residual earnings, that is from earnings left over after all suitable (positive NPV) investment opportunities have been financed. Retained earnings are the most important source for financing for most companies. A residual approach to the Dividend policy means that the first claim on retained earnings is to finance the investment projects. With the residual Dividend Policy, the focal point of the firm's management is indeed on investment, not dividends. Dividend policy becomes inappropriate; it is treated as a passive rather than an active decision. The analysis of

management in this case is that the firm value and the shareholders wealth will be enhanced by investing the earnings in the suitable investment projects, relatively paying them out as dividends to shareholders. Thus managers will dynamically seek out, and invest the firm's earnings in positive Net present value investment projects, which are likely to increase the firm value. Dividends will only be paid when retained earnings exceed the funds necessary to finance the appropriate investment projects.

Thus the first hypothesis is accepted here that there is a negative relationship between Investment opportunities and Dividend payout.

Results indicate that the leverage shows significant relationship with dividend payout. Relationship is significant at 10%. The results are according to previous literature and theory of free cash flows. Firms with high leverage pay fewer dividends to meet debt obligation. Rozeff (1982) found a negative relationship between leverage and dividend who argued that a firm having more financial leverage use lower dividend payout policy to reduce the cost of external financing.

Literature found negative impact of Leverage on dividend policy (Johnson, 1992; Almalkawi, 2005). These researchers have shown that firms with more leverage retained the internal cash flows rather distribute it between shareholders since high leverage firms experience high financial cost for getting finance for this firms have to keep its internal financial resources to fulfill the claims of creditors rather than distribute between shareholders as a dividend. So the 2nd hypothesis is accepted here that there is negative relationship between leverage and dividend payout.

Profitability is used as control variable in this study. Results show that profitability shows significant and positive relationship with dividend payout. It means that profitable firms pay more dividend as these firms have more free cash flows to distribute to shareholders as dividend. Firm size is also a control variable used in this study. It shows insignificant relationship with dividend payout.

R-squared is 39.8. it means that 40% variation in dividend payout is explained by independent variables.

CHAPTER 5

5.1 Conclusion

The purpose of current study is to explore the reasons behind decline in dividend payouts. In broad to explore the impact of Investment opportunity set and leverage on dividend policy of Pakistani Listed Firms. In the context of Pakistan some recent research has been done on determinants of dividend policy (Ahmed and Attiya (2009)., Ayub (2005)). But no comprehensive and significant study has been done on the impact of investment opportunity set and leverage on dividend policy in the context of Pakistan. The results indicate that these independent variables have significant and negative relationship with dividend policy in the context of Pakistan. The results are according to previous literature and theories that firms having high growth opportunities pay lower dividend then those firms which have less growth opportunities because these firms allocate funds on positive net present value projects rather paying dividends (Deshmukh, 2005). Several researchers found a significant negative relationship between dividend payout and growth opportunities (Collins et al, (1996); Zeng, (2003); Amidu & Abor, (2006); Gul, (1999) and Deshmukh, (2005)).

According to free cash flow theory, managers of the firm with few investment opportunities and high free cash flow pay out more dividends since they have fewer growth opportunities to invest in positive NPV projects. While firms with more investment opportunities pay less dividend since these firms need the cash for investment opportunities (Smith & Watts, 1992).

The results indicate Leverage has significant and negative relationship with dividend payout. firms with more leverage retained the internal cash flows rather distribute it between shareholders since high leverage firms experience high financial cost for getting finance for this firms have to keep its internal financial resources to fulfill the claims of creditors rather than distribute between shareholders as a dividend.

5.2 Findings and policy Implication

The study comes up with the fact that Corporate Managers attempt to accumulate funds in their commands at the cost of low payouts since managerial practices are not firmly monitored and rights of investors are not protected strongly in Pakistan that seems to be reason behind the nonpayment of dividend from stock market of Pakistan. In addition investors in Pakistan consisting of dealers, stock brokers, retired civil servants, agents, jobholders, business men, and professionals who are more concerned in capital gain from long buying and short selling based rather dividends, and this is due to the reason that dividend is subject to double taxation and capital gain is exempted from taxes.

In addition, most of the individual investor in Pakistan likely to be interested in speculative profit relatively to long term investment in equity shares and they do not consider dividend as a direct source of funds that minimize the individual liking towards dividend, end result companies unwilling to pay dividend which is in line with "Catering Theory". That explains management gives incentives to shareholders according to their expectations.

Pakistan is an emerging economy. The corporate Governance is not successful here as compared to developed economies, most of the companies are controlled and owned by families and they held the top managerial positions. The managers take advantage of minority shareholders for the sake of their own ends. They retained earnings are used for investment opportunities instead of paying dividend (Shah et al., 2010) and after making investment free cash flows are not distribute it to shareholders. As the ownership is concentrated in most of the companies as a result Directors enjoy a heavy salary that results in reduction of earnings of companies and that directly affect dividend payouts.

Pakistani market has diverse characteristics as compared to other developing and developed markets. Economic and political factors are very dynamic which have strong impact on firm performance.

This study has an addition to the body of literature on the impact of investment and leverage on dividend policy in emerging market of Pakistan. The findings of the study emphasize the need for good Corporate Governance to maintain a stable earnings, cash flows and dividend payout.

This study has significant implication for policy makers, academics and shareholders, investors and practioners. For academics, the research broadens the analysis of investment opportunities and leverage in addition to usual approach based on dividend policy. To study the investment, financing and dividend decision is significant for academia for supporting instructors, lecturers, future researchers and students by providing useful information for deeper understanding of knowledge. As, no comprehensive study has been

done on the relationship of Investment, leverage and dividend policy in the context of Pakistan and major focus of published documents is to just measure the determinants of Dividend policy without providing proper evidence. This empirical as well as theoretical study will contribute and shed light on determining the impact of Investment opportunity set and Leverage on Dividend Policy in the context of listed firms of KSE.

For practioners this study emphasizes how financial decision can have asymmetric effect the firm value. So the firm must consider the investment opportunities as well as dividend payout. For policy maker institutional and legal environment is very necessary to protect the rights of stakeholders and help policy makers to make effective policies regarding dividend and investment and in their decision making process consider the interest of minority shareholders

It can also provide useful information that helps regulators for re sketching their policies and design a realistic structure.

This study can help shareholders of the firm to ensure proper mechanism of awareness about the value and growth of the firm because when they have full awareness they will get reliable and accurate information about the performance of the company and they can safeguard their investment and in future they are able to decide whether to hold the investment or withdraw it.

This study can also be useful to aware Investors that in Pakistan most of the companies are controlled and owned by families, board of directors who are non professional, elected on the basis of social relationship with shareholders.

Thus people should have to take rational investment decision by taking into account facts and figures.

5.3 Limitations and Future Directions

The major limitation of the study is that it only included only healthy firms that the companies with consistent record of dividend payment and earnings. Future research might effectively consider the unhealthy firms too (firms with irregular record of dividend payment and earnings) in the model or a mixture of both unhealthy and healthy firms. Moreover these two approaches will confirm or disconfirm the effectiveness and efficacy of the model used in the study.

Future studies must include other variables. For example cash flow uncertainty, liquidity in the model.

The future study must extend the data for more time periods.

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