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Economic Policy Uncertainty and Capital Structure: An Evidence from Pakistan

by

Adnan Ahmed

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degree of Master of Science

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To My Beloved Parents



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Abstract

The research thesis examines the effect of economic policy uncertainty (EPU) on the corporate capital structure with control variables. Economic policy uncertainty is an economic risk linked to the government policies and regulatory framework that are not yet defined. These uncertain economic policies have a significant impact on the financial market and company financing decisions. This research thesis used a sample of Pakistani non-financial firms for two spans of 2015-19 and 2011-19. The fixed effect regression model was used for analysis. The results show that EPU has a significant positive effect on firms' leverage. However, the magnitude of EPU for the period 2015-19 is stronger than the period 2011-19. The control variable size has an overall positive relationship with leverage. Liquidity, growth, and dividends show a negative relationship with leverage.

Keywords: economic policy uncertainty, fixed effect, size, Liquidity, growth, dividend.

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Abbreviations

DIV	Dividend
EPU	Economic Policy Uncertainty
LIQ	Liquidity
MTB	Market to Book Ratio
S	Size
TDA	Book Value of Debt
TMD	Market Value of Debt

Chapter 1

Introduction

1.1 Background of the Study

Policy uncertainty refers to a type of economic risk in which the upcoming direction of government policy is unknown. This economic uncertainty causes the risk premium to rise and as a result of the investors postpone spending and investment till the ambiguity is resolved (Makololo and Seetharam 2020). Governments in these situations are more expected to develop and implement economic policies, rules, and regulations that guide investors' and corporations' decisions. Because of the nature of the decision-making process, these agents must act in an unpredictable environment. In this sense, uncertainty is predicted to have a substantial influence on agent decisions and, as a result, on the entire economy (Yarba and Güner, 2020).

According to Zhang et al. (2015), economic policies often produce a high level of uncertainty as a result of policy decisions are made and implemented. These policies have a major impact on the financial market and corporations' behaviors such as minimizing or exaggerating investment decisions. In terms of business contexts Policy uncertainty is produced by the time it takes to adopt newly implemented policies (Cao et al. 2013).

Uncertainty is an ambiguous but comprehensive notion that distresses a wide-ranging of people, that include clients, company administrators, and legislators.

Bloom (2014) examined economic uncertainty and revealed that uncertainty increases as a result of an impulse arising from severe news shocks. These shocks result in recessions in the country and intensify them, so the economic growth slows down. According to the author, when the policymakers disagree with economic strategies, the amount of uncertainty may be greater than usual in these periods (Bloom, 2014).

Capital structure is a crucial concept when it comes to firms injecting funds or diversifying their interests. Investment of equity and debt capital in domestic and foreign enterprises has an impact on the company's profitability as well as its ability to weather economic adversity, such as a recession. Different macroeconomic conditions expose businesses to various risks. The literature has shown that financing decisions of firms change with the change in macroeconomic condition in the country, as a result, the capital structure choices also changed. According to Hacbarth et al (2006) model, the change in the phases of the economic cycle changed the level of debt and equity. Furthermore, these changes also alter the shareholder threshold which they have chosen, result in the change in capital structure. Chen (2010) stated that the variation in the business cycle changes the forecasted growth rates, uncertainty related to the economy, and risk premium. All these factors enforce the decision of capital structure to be dynamic and state-dependent.

Klossner and Shekkel, (2014) argue that macroeconomic decline in a country occurs as a result of the policy uncertainty shocks. When combined with the above-mentioned theoretical capital structure assumptions, the data suggest a link between EPU and capital structure choice. If there is such a correlation, it begs the question of whether EPU as a systematic factor is more or less crucial for capital structure decisions than idiosyncratic company characteristics that are said to be reliably important elements (Frank and Goyal, 2009).

Julio and Yook (2012) discovered that firms minimize investment spending during election years when political uncertainty is prevalent. In a study, Cao et. al, (2013), inspect the association between political uncertainty and corporations' entrance to debt market. They found that corporations having access to debt markets are less vulnerable to political uncertainty in terms of intertemporal capital

structure changes. The firm's cash-holding actions in reaction to variations in the level of political uncertainty worsen the financial frictions (Cao et al, 2013).

Large corporations are frequently correct in their reasonable or illogical capital structure decisions. These decisions make it easier to replicate them by firms having relatively smaller in size and experience. According to Cao et al, (2013), businesses which are less sensitive to political risk and have limited access to public debt markets are less vulnerable to changes in political uncertainty when making financial decisions. Firms react to other firms' capital structure decisions rather than variations in firm-specific variables when making capital structure decisions. (Leary and Roberts 2014).

Uncertainty can have an impact on the business climate of all companies, affecting their investment and financial strategy. Bernanke (1983), developed models that show how political uncertainty might drive businesses to put off making irreversible investments. In the support of this claim numerous scholars have found empirical evidence, Gulen and Ion (2016), and Baker et al, (2016), are few of them.

The increase in economic policy uncertainty might lead a company's financial policy to adopt a more restrained capital structure (Cao et al, 2013). Furthermore, a high level of economic policy uncertainty might cause enterprises' loan and equity costs to rise (Francis, Hasan, and Zhu, 2014, and Pastor, and Veronesi, 2012).

Different empirical data have been studied on the drivers of capital structure based on these models using vast financial data from businesses in many countries across the world. Business size, profitability, liquidity, and growth are some of the utmost important financial characteristics that explain capital structure at firm level (Chen, 2004). some country or region-specific elements, like inflation and GDP growth rate, are thought to influence enterprises' capital structure in addition to these (De Jong, Kabir, and Nguyen, 2008). However, these studies, have ignored the possible impact of economic and political policy uncertainty in terms of capital structure.

Shocks tempted by policy variation's timing, content, and impact are usually viewed as the primary reasons for uncertainty in a corporate environment. The question of whether the risk regarding policy shocks has any impact on corporate

financing decisions inevitably arises. Due to data limitations in the past, extant works have disregarded the subject that how policy-related risks distress corporate financial decisions.

These problems could be solved by utilizing the Baker et. al, (2016)'s economic policy uncertainty index, which incorporates a wide range of economic and policy-related concerns and includes news-based policy uncertainty, proposed tax expiry, and economic forecast deviation. In addition, there is a growing acknowledgment that geopolitical risk and political uncertainty have major impacts on economic cycles and the performance of the financial market (Lee and Lee, 2019; and Lee et al, 2019).

Significance of EPU in making leverage decisions is still being investigated and the impact of EPU on capital structure decisions has been largely disregarded in earlier research. Quite a few studies have started the debate of the importance of EPU regarding the decision of capital structure (for example Cao et al 2013; Lee et al. 2019 and Li and Qui 2021).

Li and Qui (2021) stated that the effect of EPU is not uniform on leverage but changes with firm characteristics. This study is inspired by the work of Li and Qui (2021) and extends their seminal work for studying the corporate capital structure in Pakistan.

The majority of research work on this topic focuses on established markets in Western countries like the United States. This is understandable, given the maturity and diversity of financial markets, as well as good regulation and the comparatively high openness of corporate behavior in developed countries. Based on research conducted by Chakraborty (2010), it can be concluded that emerging markets have particular characteristics that influence enterprises' financing practices.

Limited availability of funds, severe asymmetric information and agency problems, severe macroeconomic risks, ineffective corporate organization, and a low level of corporate management are just a few examples. As a result, emerging-market financial markets differ greatly from developed-market financial markets. Due to inefficient market functioning and the large risks involved, forecasting and long-term planning become challenging.

Pakistan is a bank-based developing country and raising bank debt is easier for firms than issuing equity (Ahsan Wang and Qureshi 2016). Pakistan's economy has had a volatile growth pattern throughout the years, with repeating boom and bust cycles, making long-term and comprehensive growth difficult to attain. Long-standing structural issues, such as unprofitable state-owned corporations, a dismal external position due to insufficient export volume and low foreign direct investment, an under-reformed energy sector, and a lack of savings and investment, all contributed to unsustainable economic growth. In addition, Political instability, law and order issues, and terrorist operations all contribute to the economy's weakness. Furthermore, the political connection of firms in borrowing made the corporation more prone to bankruptcy (Khwaja and Mian, 2005) and as a result discouraging investment. All these factors make the Pakistani economy unpredictable and volatile.

This research thesis examines the sample of Pakistani firms for two-span i.e.2015-19 and 2011-19 and has two primary objectives. First, it pursuits to verify whether the economic policy uncertainty (EPU) has an effect on the leverage decision, and secondly through which channel EPU affects the firm's leverage. The literature analyzed this in terms of whether EPU has a positive or negative impact on leverage. For doing empirical analysis, the fixed-effect model is used. In the concern of EPU measure, the news-based EPU index of Choudhry et al (2020) is used in this study.

1.2 Supporting Theory

1.2.1 Modigliani and Miller Theorem

Capital structure theories were originated based on Modigliani and Miller's (1958) proposition, which states that there is no impact on the value of corporations regarding how the capital structure choices they made. Given the importance of capital structure in defining the firm's value and cost of capital, management highlights its importance. However, the above-mentioned rationale, on the other hand, is finished by contemplating perfect capital markets, in which there are no

taxes, bankruptcy costs, or knowledge asymmetries. Therefore Modigliani and Miller's (1958) premises are believed to be overly limiting. Modigliani and Miller (1963) ultimately recognize market flaws and alter their previous work and add the tax benefits on loans as a means of increasing firm worth. More shortcomings in Modigliani and Miller's claims were revealed as financial systems have grown. On this foundation, the capital structure theories were established and research has been conducted to support the prominence of capital structure selection.

1.2.2 Trade-Off Theory

The trade-off theory was proposed by Myers in 1984. The theory stated the ideal capital structure could be attained, by maintaining a balance between both the debt advantages of tax relief and the debt costs of increased financial distress risk. (Myers, 1984). The assertion is based on the compensations between potential benefits of debt financing and expenses. Modigliani and Miller (1963) argue that firms can benefit from leverage as a result of the interest deduction of pre-tax revenue. In other words, interest expenses reduce taxable income and allow firms to save money on taxes, resulting in a tax benefit (Graham, 2003). However, according to Myers (1984), while corporations can benefit from tax deductions by increasing debt levels, therefore every firm should endeavor for its optimum capital structure, through increasing or decreasing debt.

These firms can have the perfect debt-to-equity ratio, in which the cost associated with issuing one extra unit of debt is equivalent to the debt's tax advantage. Debt financing entails a promise of future financing activities due to the debt required for interest expense in the future. Increased uncertainty is expected to lead to a smaller tax shelter, a higher agency cost of debt, and a higher rate of bankruptcy, prompting enterprises to reduce their leverage. (Khan, Qin and Jebran, 2020).

According to the logic outlined above, During ordinary circumstances, companies may increase their debt levels as far as the advantages of debt outweigh the risks of bankruptcy. During times of crisis, however, the danger of bankruptcy rises dramatically, increasing the likelihood that debt costs would outweigh debt advantages.

In other words, during a crisis, businesses are compelled to reduce their debt levels. Nonetheless, the trade-off model supports the benefits of debt financing if the corporation manages the balance between debt advantages and debt costs.

1.2.3 Pecking Order Theory

Pecking order is a competitor theory proposed by Myers, (1984), and Myers and Majluf, (1984). The rationale underpinning of the theory is centered on the idea of inadequate awareness between managers and investors (Frank and Goyal, 2009). Managers are assumed to have a greater understanding of and access to information about the company's future than others, and hence act in the best interests of the company. The optimum capital structure did not engage as a preliminary step in pecking order theory. Conversely, the theory suggests that organizations should prefer internally generated funds and only employ external resources when internal sourcing fails. (Myers and Majluf, 1984).

According to pecking order theory the best way for businesses to act according to information in the market, because issuing shares to fund operations signals to outsiders. These signals indicate that the company is short on cash, which can lead to a share price fall. When outside financing is desired, however, the theory highlights that the investment's relative costs and risk are the most important factors in deciding which financing options to pursue (Myers, 1984). As a result, businesses issue debt first, followed by stock (Myers, 1984). Asymmetric information increases the cost of borrowing and contrary choice; as a result, firms prioritize internal money first, then debt, and in last choice equity as their financing sources. Higher leverage is expected if uncertainty is linked to a higher unfavorable selection of costs. The policy uncertainty increases information asymmetry in the market. When this information asymmetry became worse, between lenders and borrowers causing the corporations' cash flow more erratic, driving the borrowers' capacity to pay off the debt at jeopardy (Zhang et. al, 2015; and, Pan et. al, 2019).

According to the pecking order theory, corporations have lower debt levels before an economic collapse because they are more productive and generate earnings in

normal working conditions or during crises. Firms, on other hand, become less lucrative and frequently encounter liquidity challenges during crises (Cetorelli and Goldberg, 2011), prompting them to seek external finance. To put it another way, pecking order theory implies a large amount of debt in economic crises when companies' available resources are likely to be insufficient.

1.2.4 Market Timing Theory

The market timing theory was proposed by Baker and Wurgler (2002). This theory raises objections to both trade-off and pecking order theory. The theory suggests that management chooses the most cost-effective and useful financing option based on current credit and stock market conditions (Jahanzeb, et. al, 2013). According to the notion, Corporations should invest in stocks and buy back them when they perceive stock values are inflated, or issue bonds when share prices are discounted or the interest rates in the market decreases (Baker and Wurgler, 2002). As a result, market changes have an impact on companies' decision-making of capital structure. Firms adjust their leverage to take advantage of attractive price opportunities, in accordance with the market timing theory, if firms' debt is underpriced as a result of uncertainty in the market, leverage should be negatively correlated with uncertainty (Khan et. al, 2020).

Companies have an incentive to release more stock during peaks, when assets are overpriced, as shown by the rationale above. As a result, the market timing theory predicts a low overall debt precedes an economic crisis. Prior to the 2008 market catastrophe, however, interest rates were extremely low, encouraging businesses to take on more debt (Crotty, 2009). To put it another way, firms had opportunities either to cut and increase their debt prior to the financial collapse.

1.3 Research Gap

The value of EPU for capital structure decisions has been understudied. Until recently, capital structure academics and theories had mostly ignored EPU. Recent empirical research has begun to fill this void, with a focus on the consequences of

government policy uncertainty on business investment decisions. The majority of capital structure research is focused on developed countries. All of these research used distinct capital structure determinants, although economic policy uncertainty was little expressed in these researches. Some studies Cao, et al, (2013), Li and Qiu, (2021) and Zhang, et al, (2015) examines economic policy uncertainty as independent variable but these studies are conducted in developed countries context. However, economic policy uncertainty (EPU) has not been studied as an independent variable in any developing country.

1.4 Problem Statement

The traditional theories of capital structure, like the trade-off, pecking order, and market timing models were tested in plentiful capital structure research. All of these corporate finance models have focused only on the link between leverage and the features of the firm. The study on economic policy uncertainty shows that when the EPU is high, US firms cut capital spending on investments (Gulen and Ion; 2016). Cao et al. (2013) examine how EPU influences the interval of time that a stable leverage ratio regime continues for US firms, but they do not provide any real information on how capital structure choices diverge as a result of EPU. Li and Qui, (2021), investigate the influence of EPU and firm factors on leverage and find that EPU and firm factors mutually influence companies' leverage targets, causing real leverage ratios to move partially towards targets. All of these studies were conducted in the US and do not provide evidence that either these results are valid across the globe or valid for only US firms. Therefore, examining the influence of EPU on capital structure in a developing country could help to clarify the concern, as these countries have more uncertainty in their economic policies than a developed country like the US.

1.5 Research Questions

This study tried to answer the following questions:

Research Question 1

Does economic policy uncertainty affect the capital structure of firms?

Research Question 2

Does firms' size affect the capital structure of firms?

Research Question 3

Does liquidity affect the capital structure of firms?

Research Question 4

Does growth affect the capital structure of firms?

Research Question 5

Does dividend affect the capital structure of firms?

1.6 Research Objectives

Objectives of the study are as follow:

Research Objective 1

To investigate the impact of economic policy uncertainty on the capital structure of firms.

Research Objective 2

To investigate the impact of size on capital structure of firms.

Research Objective 3

To investigate the impact of growth on capital structure of firms.

Research Objective 4

To investigate the impact of liquidity on capital structure of firms.

Research Objective 5

To investigate the impact of dividend on capital structure of firms.

1.7 Significance of the Study

This study adds to the growing body of knowledge of dynamic capital structures. This research will help researchers better understand how a corporation finances itself in a dynamic environment and how it affects the firm's worth. The Pakistani financial market's ownership structure and bank-firm ties differ from those in the United States. These factors produce considerable cross-sectional changes,

allowing for a clearer understanding of the policy uncertainty effect's possible asymmetry. This will also assist us in determining the probable roles and mechanisms via which economic policy uncertainty influences capital structure decisions by enterprises. And finally, this study will help the policymakers in Pakistan to strengthen financial performance.

1.8 Organization of the Study

The rest of the research thesis is organized as follows: Chapter 2 covers the literature review on the issue. The data and technique are discussed in Chapter 3; the results and debate are discussed in Section 4. The study's conclusion, recommendations, and future directions are discussed in Chapter 5.

Chapter 2

Literature Review

2.1 Theoretical Background

Capital structure of the corporation is the mix of debt and equity that it uses to engage in financial activities. Commonly It is referred to as the debt to equity ratio of corporations, which gives information about the firm's level of risk and ability to meet its obligations. One of the most renowned ultimate works on capital structure is by Modigliani and Miller. They believe that because the market is ideal, the capital structure should have no bearing on the firm's worth. Following that, numerous researches abandon the assumption of flawless market conditions in favor of developing the model which then demonstrates how capital structure affects business value. Organizations must have a distinctive optimal capital structure, according to the trade-off theory (Miller, 1977), in which the fringe gains of borrowing are equal to the fringe costs of borrowing. Tax benefit or a reduction in agency charges are the inclusion of the positive, however, these costs include a high level of interest payments and the hazard of bankruptcy. When it comes to financing a new investment, this idea suggests that corporations prefer to employ internal capital over external funds. Internal funds will be prioritized first, and then outside loans, and equity financing respectively.

There was no generally accepted debt selection theory before Modigliani and Miller (MM, 1958), which directed towards theoretical foundations of capital structure. Beginning with a study of the capital structure by Modigliani and Miller,

economists concentrated on the capital structure of companies and financing policies (Morellec, 2004). The original theory of Modigliani and Miller assumed a world with flawless capital markets and stated that an organization's market value is independent of leverage..

According to Modigliani and Miller (1958), companies can divide the cash flow based on the amount of equity and debt required for the company for financial operation. The MM proposition assumes that both investors and companies have equal access to financial markets. It does not matter for the firms whether funds are acquired by issuing shares or debt. In the face of uncertainty, however, using borrowed funds rather than capital to finance projects may significantly raise the forecasted return for shareholders, but at the expense of increasing the spread (Modigliani and Miller, 1958)

Frank and Goyal, (2005), argue that this claim fails to take account of several contexts, including the use of taxes, economic ties, bankruptcy risk, agency conflicts, unfavorable choices, and inadequate choices in both investments and operational processes, and disputes between shareholders and investors. There must be imperfections to be properly organized in the capital. Concerned by the various responses from the academic and business world, Modigliani and Miller changed their proposals by adding taxation. The tax payments have an impact on the cash flow that can be delivered mostly in form of stock, which raises goodwill. (Fabich et al., 2012).

According to Myers (1984), firms use the trade-off approach to set a debt level goal and then work toward it gradually. The targeted level of debt is calculated as weighing the expenses of bankruptcy against the tax benefits. According to the theory, businesses should grow their obligation levels till the fringe tax benefit of more obligation equals the insolvency cost. As a result, when the tax rate is greater, businesses prefer to employ more debt, even though relying heavily on debt is extremely risky due to the very real dangers of failing and the enormous expenses of bankruptcy (Baxter, 1967).

A couple of components of Myer's proposal were raised to debate. For starters, because the level of debt goal isn't quantifiable, a framework must be supplied.

Secondly, the concept does not specify which portions of the complicated tax system are covered. Third, more consideration of the nature of the expenses associated with bankruptcy is required. Finally, transaction expenses must be specified in detail. Therefore Frank and Goyal (2005), divide Myers' concept into two parts i.e static and dynamic.

According to Diamond (1989), Mature businesses would be less prone to failures and could have relatively low agency problems than newer businesses, which are more prone to employ debt. Furthermore, debt is influenced by a company's managerial reputation. According to Frydenberg (2004), the pros and cons of using debt are crucial in developing a solid debt financing theory in corporate finance.

Firms benefit from debt issues in a variety of ways. The optimal debt ratio, according to the theory, increases the firm's worth. Dividends and interest expenses are deducted on an individual basis, which in turn lowering earnings, according to Frydenberg (2004), however, only interest expenses, are deducted from a corporation's revenue. According to Miller (1977), the level of debt may not be affected by the tax rate if both corporate and individual taxes are considered.

Myers and Majluf's (1984) pecking order theory emphasizes informational asymmetries and signaling implications. The premise is based on Myers' (1984) informational asymmetries theory, which states because the management had more insight than investors about internally cash reserves, investment prospects, and business value, impacting the decision to use internal versus external funding. According to the pecking order theory, corporations need not strive for an ideal capital structure, and debt ratios are determined by external funding demand. According to this notion, when it comes to funding projects, businesses follow a specific hierarchy.

According to Sunder and Myers, (1999), firms executing operations between 1971 to 1989 validated strong approval for the pecking order theory. Abosede (2012), on the other hand, claims that the idea may be explained from a behavioral standpoint. Corporate executives tend to act following their experiences and abilities, opting for strategies that avoid confrontations with shareholders. Small businesses

with strong growth potential behave in the same way as larger businesses, as anticipated by the pecking order theory. Large enterprises differ from small firms in that the former have more access to external capital than the latter. As a result, smaller companies are usually taking on less debt and equity.

According to Cosh and Hughes (1994), Small businesses are more likely to use flexible resources to support investments. They use short-term borrowing rather than long-term borrowings and eliminate equity and debt, and concentrate on leasable assets when raising funds.

The market timing capital structure theory suggested by Baker and Wurgler in 2002, stated that companies target to schedule the investment portfolio by issuing new stock when it emerges to be overestimated and purchasing back stock when it emerges to be underpriced. In a nutshell, it is buying cheap equity and selling it when gets expensive, implying that businesses seek to profit from market fluctuations. Managers may be enticed to time the stock market if they believe it will benefit existing shareholders. Market timing benefits existing shareholders at the possible cost of the new and old stockholders. The debt to equity ratio is characterized in this way as the sum of the corporation's efforts to find the optimum timing (Baker and Wurgler, 2002). Stock price volatility, on the other hand, may have an impact on a company's capital structure.

Companies that have a preference for issuing seasoned stock or shares (equity) to the public at a high market value rather than debt, according to Taggart (1977). Market timing was detected in the perspective of an initial public offering by Loughran, et al (1994); Pagano, Panetta, and Zingales (1998). Graham and Harvey (2001) based their findings on a survey and interviews with various Chief Financial Officers. The timing of the equity market was admitted by two-third of officers.

The capital structure of the firms has been explored empirically. Market timing has also been demonstrated to have a huge impact on delivering financing perks and intensifying the short-term withdrawal from leverage (Leary and Roberts, 2005). This explains why companies with continuous market-to-book ratios are categorized as growth companies. Graham and Harvey (2001) conducted a survey

and concluded that two out of three of the polled CFOs agreed that they looked at their stock values with specific attention on how much they were undervalued or overvalued. In accordance with the results of the survey, managers admit to market timing. This has a major impact on stock prices because it motivates managers to sell it at a premium. (Baker and Wurgler, 2002).

2.2 Policy Uncertainty

According to the literature, uncertainty has a substantial impression on corporate decision-making. Because policymaking is fraught with uncertainty, it has the potential to influence corporate decisions. Corporations are far more hesitant to make corporate decisions during high policy uncertainty, like investment (Kang et al, 2014 and Gulen and Ion, 2016) and debt cost (Bloom et al, 2007; and Bradley et al, 2016). There is also proof that policy uncertainty has an influence on capital structure (Ha et al, 2018; and Zhang et al, 2015).

When it comes to capital structure compassion to unpredictability, one school of thought contends that increased business vulnerability increases the likelihood of insolvency, causing firms to change their capital structure by using less debt financing when their revenues are even more volatile (Chow et al, 2018).

Another school of thought holds that uncertainty worsens the external environment. As a result of the increased uncertainty, the information asymmetry between creditors and borrowers has degraded, causing the firms' cash flow to be more unpredictable, thereby endangering the borrowers' capacity to pay off the debt (Zhang et al, 2015; and Pan et al, 2019).

Corporate investment decisions are made not only with the amount of leverage in mind but also with the country's economic uncertainties in mind. According to Aldata and Wijaya (2020), one example of shifting policies during the political turbulence that happened in Indonesia near the 2019 elections. The Indonesia Stock Exchange's share prices have been volatile due to the country's economic turmoil in the run-up to the 2019 elections. Therefore when uncertainty increases it changed the whole economy of the country.

According to Khan et al (2019), monetary policy uncertainty leads to market uncertainty. Not only that, but uncertainty can come from within the company as well. Internal changes can create uncertainty for businesses; for example, a change in the company's top management, according to Beckman et al. (2004).

Policy-related risk, such as geopolitical uncertainty, policy uncertainty, and political risk, has been well acknowledged in the literature as having an impact on the real economy (e.g., Bloom, 2009; Zhang et al, 2019). These vulnerabilities are seen to be the most important determinants of employment and economic growth.

A developing and expanding literature contends that Policy uncertainty is an important factor in the recognition of micro-level business investment decisions. The majority of these researches are mainly concerned with investment activities. According to the real options theory, in response to economic fluctuations and uncertainty, the worth of a waiting option rises, potentially delaying a firm's investment operations (Kang et al, 2014).

According to Francis et al, (2014), financial decisions are influenced by political instability. Baum et al, (2006) also discover that enterprises' desire for cash is influenced by uncertainty about future economic conditions. When uncertainty rises, business leaders become more cautious, and their cash management strategies follow suit. Firms facing high economic policy uncertainty, according to Demir and Ersan, (2017), have a larger tendency to maintain cash on hand due to cautious considerations.

Baum et. al, (2009), determine that a corporation's leverage choices are adversely associated with uncertainty, with an emphasis on macroeconomic uncertainty. Economic and policy-related risks have been found in earlier studies, which raise financial market frictions, influencing the cost of external financing. The equity risk premium increases as a result of these economic and policy-related risks (Pastor and Veronesi, 2012). The debt cost according to Francis et al, (2014), and default risk (Gilchrist et al, 2014) are also examples of these effects. Lee et al. (2017) found that policy uncertainty impacts the leverage behavior of the US banking sector. They further stated that the policy-related risk is expected to have a foremost influence on company financing decisions.

The macroeconomic situation and policies that a government implements are critical in affecting the financial setting. Monetary policy has a substantial effect on external finance and investment project discount rates (Baum et. al, 2009). A deflationary monetary policy affects interest rates, which in turn increases the leverage cost. Higher discount rates, reduce the rate of investment, resulting in a decrease in consumption for external borrowing. The impact of country-specific aspects such as macroeconomic conditions and structural reforms, on the other hand, is about to be effectively acknowledged (Pindado et al., 2017).

In periods of increased macroeconomic risk, companies choose joint-stock capital choices over debt capital options, according to Gertler and Hubbard (1991) to pass at least a portion of the risks to creditors. Baum et al (2009) demonstrated empirically, when macroeconomic risk increases, condenses the optimal load of a long-term loan by a significant amount. D. Hatzinikolaou et al. (2002) discovered that uncertainty about inflation had a detrimental impact on a company's financial leverage. Bhamra and Kuehn (2010) used the dynamic capital structure approach and disclosed that impulsively changing macroeconomic situations have a major effect on corporate financing strategies. Higher macroeconomic risks, according to Chen (2010) result in a fall in the deferred value of the predicted tax advantage.

When faced with financial difficulties, corporations attempt to limit the quantity of borrowed capital they use as long as the benefits of debt capital diminish. When economic conditions are unfavorable, corporations become more cautious (in terms of debt financing) to maintain financial flexibility, according to Bhamra and Kuehn (2010). This indicates a favorable reliance on financial leverage. Caglayan and Rashid (2014) also show that short-term debt in both private and public organizations is negatively associated to macroeconomic risk. One would think that the increase in uncertainty is linked to the slowing of GDP growth. Policy uncertainty, on the other hand, can have a greater impact on the debt load due to the demand and supply effect with loan capital.

Firms become more vigilant in their investing and borrowing decisions in a very uncertain situation. On the one side, the high uncertainty may cause firms to generate less revenue, which alternatively results in cash flow shortfalls for investments. Numerous research (Baum et. al, 2009; Gulen and Ion, 2016) show that

when enterprises are economically restricted and incompetent to sustain long-term expenditure in projects, uncertainty dramatically reduces capital investment.

Uncertainty, on the other hand, create the information asymmetry between borrowers and creditors, thus reducing the organization's capacity to borrow and disburse debt. As a result, studies suggest that in a difficult economic situation, businesses are more vulnerable to debt financing (Baum et al. 2009). Furthermore, earlier research has shown that enterprises facing uncertainty will limit their debt (Baum et al, 2009; Ha et al, 2018; and Zhang et al, 2015). According to Baum et al. (2009), distinctive and market uncertainty are adversely linked with firm leverage, as the market uncertainty having a higher adverse effect than distinctive uncertainty. Caglayan and Rashid, (2014), discovered that during periods of high uncertainty, UK manufacturing enterprises employ less debt finance. Furthermore, they stated that the public firms' leverage is not as sensitive to firm-specific uncertainty as of non-public firms', while the effect of macroeconomic uncertainty is the same for both organizations. Zhang et al, (2015), argue that corporations operating in China reduce leverage when the policy uncertainty increases. However, state-owned businesses that have banking links or operate in low-marketization areas are less affected by policy uncertainty. They also found that a decline in the external financial environment has an adverse effect.

Pan et. al, (2019), stated that political instability in a country has a substantial negative relationship with the target leverage and debt maturity. They additionally stated that global and country-specific political uncertainty has an adverse influence on leverage and debt maturity, whereas domestic political distress has a greater impact. Furthermore, there is a negative association between political instability and leverage, although the negative relationship between debt maturity and bad credit is less prominent for firms with a bad credit history and greater investment flexibility. Firms with high uncertainty have the lowest leverage, while firms with high leverage have a higher leverage adjustment speed (Ha et al, 2018). Baum et al, (2005), studied United States non-financial firms and discovered a reverse connection between macroeconomic uncertainty and leverage. According to Chow et al, (2018), macroeconomic uncertainty has a negative influence on capital structure decisions.

Previous research on the factors that influence a company's decision to borrow money has primarily focused on industrialized or advanced countries. Baum et al, (2009) investigated the consequence of macroeconomic and distinctive uncertainty with leverage decisions in non-financial U.S companies, indicating that leverage declines with uncertainty. Frank and Goyal (2009) looked into the impact of business and country-specific determinants on non-financial U.S. firms' financing operations. They discovered that firm financing falls with profitability and rises with firm size and inflation expectations. Qiu and Li, (2010) studied the firm-level capital structure of Australian enterprises', finding that debt decreases as profits increase. The transitional economy, on the other hand, has received comparatively little attention. From an institutional standpoint, state intervention and political pressures in emerging economies have a considerable impact on company conduct. (Shleifer and Vishny, 1992).

According to the agency theory, debt is used as a retaliative tool to reduce opportunism and friction between management and shareholders when it comes to the impact of growth potential. For businesses with inadequate growth and investment prospects, a surplus of cash in hand can lead to issues such as unfavorable preferences and moral hazards. In this scenario, borrowing can help in the reduction of agency costs (Kayo and Kimura, 2011). They further stated that organizations having more growth opportunities businesses with inadequate internal funds are more likely to borrow debt to fund their investment plans, under the pecking order theory. According to the views, the firm's investment may be associated with either positive or negative growth potential.

It is commonly stressed that country-specific aspects, such as economic conditions and the uncertainty affiliated with these aspects, are crucial for organizations when making capital structure decisions. Corporations at various periods of the economic cycle typically employ a variety of financing options (Halling et. al, 2016). Frank and Goyal, (2009), investigate the impact of a series of inducing aspects on non-financial firms' leverage decisions in the United States. Macroeconomic variables were used to describe the impact of changing economic situations on the capital structure decisions made by corporations. Their empirical findings show that company leverage rises in tandem with GDP growth and projected inflation.

During the worldwide recession of 2007–2009, financial institutions in the United States became the focus of attention. Dewally and Shao (2014) study the impact of liquidity shocks on bank lending and discover that GDP growth has a substantially favorable influence. Baum et al. (2009) provide empirical evidence for non-financial enterprises being hampered by macroeconomic and idiosyncratic uncertainties.

Bernanke (1983) and Rodrik (1991), for example, develop models that show firms limit their investment in periods of increasing economic policy uncertainty. Baker et al, (2016), developed the economic policy uncertainty index for measuring the economic policy uncertainty for several countries. The major focus was on the United States and experimentally authorize the implications of Bernanke's (1983), and Rodrik's (1991), models. They also suggest that a rise in uncertainty in the market can increase the volatility of the stock and diminish employment in policy-affected businesses.

The BBD index has been used in numerous research to illustrate that economic policy uncertainty has an adverse influence on company investment (Gulen and Ion, 2016; and Kang et al, 2014). According to Huy et al, (2020), the soundness of the financial sector and the overall economy would be expressed in the shares price fluctuations of commercial banks in emerging economies like Vietnam.

Uncertainty is expected to intensify information asymmetry between lenders and borrowers. Furthermore, when the level of uncertainty rises, the likelihood of bankruptcy rises as well. As a result, banks prefer to withhold lending to businesses during periods of uncertainty, slowing company expansion (Greenwald and Stiglitz, 1990).

When it comes to fiscal policy, the economic and political policy can have a significant impact on an organization's capital structure because the knowledge disparity between lenders and borrowers is significant. In this time of increased economic and political uncertainty, the agency costs of debt between borrowers and creditors may rise. Furthermore, during periods of high economic policy uncertainty, the volatility of business cash flow might be significant, reflecting a higher risk of default.

The external funding climate would deteriorate as a result. As a result, during times of economic uncertainty, the availability of loans diminishes as banks prefer to curtail lending (Barraza and Civelli, 2020). As a result of the reduced supply of finance, firms would therefore find it extremely difficult to raise external funding (Pastor and Veronesi, 2012). As a result, organizations concerned about this issue prefer to lower their leverage in order to preserve flexibility. (Cao et al, 2013).

The impact of economic policy uncertainty on financial leverage can also be explained by the demand side of the capital. The demand effect can be seen in the demand for additional financing by businesses, as opposed to the previously described supply-side view. In essence, during periods of significant economic policy uncertainty, enterprises tend to minimize their investment, lowering their financial demand.

Economic policy uncertainty has an adverse influence on investments at both the business and national levels, according to several empirical studies (Gulen and Ion, 2016). Finally, both supply and demand perceptions point to an adverse association between economic and political uncertainty and corporate capital structure.

Qui and Li (2017) studied the consequence of economic policy uncertainty in a cross-country analysis i.e United States and Germany, and find that leverage decision made by enterprises in the two economies differ. They further stated that firms borrow more aggressively in the market-based economy of the United States during times of peace, but more conservatively during times of global financial crisis, when news-based policy uncertainties increase. Market leverage ratios in Germany's bank-based financial economy, on the other hand, respond negatively to a rise in the News-based EPU index in both tranquil and crisis periods, implying that German firms borrow less in general when policy uncertainty in the news is high.

Zhang, et.al, (2015) discovered that the leverage ratios are found to be negatively allied with EPU on average. Companies from regions with higher marketization indexes, non-state ownership, or no previous bank-firm interaction had a greater adverse impact. Furthermore, EPU's worsening external funding condition explains the unfavorable association between capital structures and EPU. The use

of trade credit is significantly linked with EPU, showing that businesses alter their financing mechanisms in accordance with unpredictable economic policy. (Zhang, et.al, 2015).

The study of Lee, Lee, and Xiao (2020) found that policy risk has a considerable adverse impact on corporate financing activities. These findings implying that corporations that are exposed to high policy risk are prone to employ external funding. They further stated that these policy risks have a bigger impact on debt financing rather than on equity financing for various financing strategies. Le et.al, (2021) discovered that as uncertainty rises, so does the usage of debt by corporations. Furthermore, they stated that when faced with a high level of uncertainty, businesses reduce their leverage because a higher level of debt during these times could discourage investment. Enterprises in emerging nations rely heavily on debt financing so that policymakers should devise strategies to offset the negative effect of uncertainty on company leverage (Le et al, 2021).

Baker et al. (2016) created a measurement in response to events that raised concerns about policy uncertainty, such as the Eurozone catastrophes, the global recession, and highly biased policy debates in the United States. The authors anticipated that policy uncertainty leads to comparable catastrophes in many places of the world, and they used the EPU to demonstrate this. According to the findings, uncertainties in economic and financial policies, as well as fiscal and regulatory policies in the United States and Europe, led to the rapid economic decline between 2008 and 2009, and also the delayed recovery that followed.

The EPU index was created to assess EPU by creating three sorts of items and then aggregating them to get the index. The first part contains monthly statistics, news items, and information, from press coverage of uncertainty, primarily from the top ten newspapers in the country, containing the phrases uncertainty, economic, and policy-related terms (Baker et. al, 2016). The raw monthly published articles in papers that meet the search criteria are multiplied by the number of publications in a single newspaper that includes the word "today."

The second section is a list of tax provisions that are agreed to expire after ten years. Baker et al, (2016), show that the majority of these clauses are "temporary"

tax mechanisms that cause uncertainty for businesses and consumers because they are frequently changed or extended in the aftermath of a political conflict.

Using data from the Congressional Budget Office (CBO) annual projections of the estimated revenue impact of the planned maturities, the authors calculated a discounted total of dollar-weighted future tax code maturities. As an indicator of uncertainty, this index predicts the future direction of tax laws, and it is becoming an important cause of uncertainty for firms and individuals.

The third component of the policy-related uncertainty indicator reflects economic forecasters' differing views on inflation and government spending. The predictions of professional forecasters for future levels of the CPI, Government expenditures, and State and public expenditures are used to generate uncertainty indices for policy-related economic determinants. Baker et. al, (2016), based their findings on a survey of fifty professional analysts conducted by the Federal Reserve Bank of Philadelphia. They discovered that bigger forecast disparities reflect variations in opinion, implying more uncertainty regarding future changes (Baker et. al, 2016). Smaller forecast discrepancies, on the other hand, suggest less uncertainty.

To create an EPU index, all three variables are combined, with the news-based factor receiving a 50 percent weighting because it is the most comprehensive metric of the three. The anticipated tax code termination part is thus given equal weight, as is the economic analysts' disagreement factor. Because of its flexibility in evaluating the degree to which policy uncertainty accounted for total economic uncertainty, the news-based approach to assessing uncertainty was chosen. As a result, Baker. et al, (2016) created an EPU index based on newspaper coverage frequency for the United States, and the same was done for Pakistan.

Pakistan economic policy uncertainty index was developed by Choudhary, and Pasha, and Mohsin (2020), following Baker, et.al, (2016), by gathering newspaper articles from websites and dividing them into two indexes. The main index is from January 2015 to April 2020 and is based on four leading English newspapers publish on daily basis.

Choudhary, et.al. (2020) also propose a second measurement that consists of two newspapers and harvested from the Web for a longer duration, from August 2010

to April 2020, to address additional factual information. The two indices are extremely connected, so they move in lockstep, capturing events such as the 2010 floods, increased terrorism and law and order, increased fluctuations in exchange rates, political turbulence, reshuffled fiscal management, the 2019 IMF program, and, and lastly the recent COVID-19 contagion.

Choudhary, et.al. (2020) constructed the index for each newspaper according to Baker. et, al, (2016) as follows. The number of articles published in each newspaper every month is scaled by the raw count of uncertainty-marked items. The components include monthly statistics, news, and information items from newspapers reporting policy uncertainty, primarily from the country. The newspapers containing the phrases economic, economy, deficit, regulation, policy, monetary policy, fiscal policy, SBP, central bank, state bank, FBR, policymakers, parliament, government, reserves, taxes, tariffs, deficit, government, legislation, regulation, budget uncertainty, unclear, unpredictable, unstable. They calculate the standard deviation of this scaled count for every newspaper for the period August 2010 to April 2020. To generate a standardized series for every newspaper, a scaled count was divided with its appropriate standard deviation. To get an aggregate EPU index, they use the arithmetic mean of these normalized measurements for every newspaper each month. Finally, set the mean value of the aggregate EPU index to 100.

While it is postulated that when there is a high level of uncertainty, corporations reduce their debt level, there is another way that could describe this link, the supply side. A high level of uncertainty, for example, could intensify the asymmetry of information between lenders and borrowers. There's a high possibility that the firm's default likelihood will rise as a result of the heightened uncertainty. Lenders will restrict credit policies in such circumstances by decreasing credit supply or charging a higher rate of interest or maybe both (Gilchrist, et al, 2014). They suggest that because external funding has agency issues (information asymmetry), a rise in uncertainty will raise the cost of capital for the corporation, limiting investment spending.

Changes in aggregate volatility, according to Gete and Melkadze (2018), diminish output, the flow of loans, and investment. The increase in volatility affects credit

supply, resulting in poorer output and investment. Finally, this increase in uncertainty leads to a drop in loan supply, which alternatively results in lower leverage ratios.

The demand side, on the other hand, describes a condition in which corporations diminish their financing demand as a result of greater policy uncertainty. Earlier studies have indicated that When corporations are faced with significant political uncertainty, they become more cautious in their investment decisions and cut back on their investments (Bloom et al, 2007; and Kang et al, 2014). Finally, both paths show an adverse association between economic policy uncertainty and firm capital structures; however, determining which influence is more powerful is impossible.

Firms may become more cautious when it comes to debt financing to maintain financial flexibility and avoid financial distress if the macroeconomic climate tightens in the future, especially if policy uncertainty is severe. High policy uncertainty discards corporate investment (Gulen and Ion, 2016). Companies' demand for external debt capital declines when they change their debt strategies to accommodate short-term investment swings (Fama and French, 2002). As a result, during periods of severe economic policy uncertainty, debt ratios are reduced.

2.3 Hypothesis Development

2.3.1 EPU and Leverage

when corporations are apprehensive about economic policy, they prefer to reduce their real debt ratios accordingly(Li and Qiu 2018). Furthermore, companies' optimal leverage ratios decline as economic policy uncertainty rises, and firms gradually adjust their real leverage ratios to match the declining optimal ones. In this way, economic policy uncertainty makes business characteristics far less influential in shaping their optimal and then real financing decisions (Li and Qiu 2018). In other words, the most reliable indicators of capital structure decisions are company characteristics; rather, economic policy uncertainty. Another intriguing conclusion is that policy uncertainty has uneven effects on corporate financing decisions in the United States (Li and Qiu 2018).

Yarba and Güner (2020) suggest that the form of uncertainty, whether it is short-term or not, affects both borrowers' and creditors' decision-making processes, and therefore leverage dynamics. Furthermore, they stated that when uncertainty persists and regulators tighten macroprudential policy tools, the financial leverage ratio and the portion of financial debt in the liabilities of Turkish non-financial companies decline. They also propose that when examining leverage dynamics, the persistence of uncertainty should be addressed rather than the uncertainty itself.

Wang, Chen, Huang, (2014) findings showed that uncertainty regarding economic policy has an adverse effect on firms' investment decisions. The variety in company characteristics, on the other hand, considerably mitigates such a negative influence. The adverse impact of economic policy uncertainty on the corporate investment is reduced for enterprises with high levels of return on capital employed, a larger reliance on internal funds, and are not state-owned. The adverse effect of policy uncertainty is reduced the most by companies that rely less on external financing.

Zhu, Sun, Xiang (2019) explore that uncertainty has a considerable negative influence on corporations' value in critical ways. The influence of EPU on corporations' value may vary depending on the features of the company. Corporations with a large scale and strong financial leverage are better able to withstand the negative consequences of EPU, but those with a high research and development commitment and a high level of economic liberalization are more vulnerable. Non-SOE,s businesses and businesses in first-tier cities are also particularly vulnerable to rising EPU.

Khan et al (2020) stated that to prevent financial difficulty, businesses reduce their leverage in times of increased uncertainty and begin depending on term credit when external funding from creditors (banks) becomes less affordable or accessible. They go on to say that term credit minimizes the negative link between uncertainty and leverage, with Non-SOE,s enterprises benefiting the most. It's because, when compared to SOE,s corporations, the Non-SOE,s corporations use trade credit more frequently to cover their financial needs (Khan et al 2020). Furthermore, as a result of the increased uncertainty, the firm's default probability may increase, and lenders may limit loan supply, resulting in a reduced leverage ratio.

Colak, Gungoraydinoglu, and Öztekin, (2018) discovered that variation in uncertainty has an impact on financial intermediation costs. These variations have an impact on adjustment patterns. Underwriters raise their overall equity and debt margins when there is a lot of uncertainty. As a result, uncertainty reduces the likelihood of debt and equity issues when relative to unconditional intervals for debt and equity issues. The financial integration costs channel explains why there are fewer issuances and a slower pace of adjustment when there is uncertainty. In the context of equity and debt repurchases, which have different cost structures and issuances, therefore the significance of this channel is less evident.

According to the trade-off hypothesis, the ideal debt and equity ratio are established when the relative cost of issuing one additional unit of debt matches the marginal tax benefit of debt. Increased uncertainty is linked to smaller tax benefits, a higher agency cost, and a higher bankruptcy rate, therefore businesses limit their leverage, (Khan, Qin and Jebran, 2020). However Bajaj et al, (2021) stated that during uncertainty the debt and equity is both became costly but the debt has marginal benefit of tax therefore corporation uses more leverage.

According to the pecking-order hypothesis (Myers 1984), asymmetric knowledge raises the cost of funding and adverse selection; as a result, corporations prioritize internal money, debt, and equity respectively as their sources of funding. . However, during uncertainty, the higher uncertainty firms face more asymmetric information and having more production cost information. Therefore these firms prefer debt over equity which implies a positive relation between leverage and uncertainty (Im et al 2020).

If uncertainty is linked to increased unfavorable selection costs, higher leverage is projected according to market timing theory, firms vary their leverage to take advantage of good price opportunities. If firms' debt is under priced as a result of uncertainty, leverage should be negatively correlated. During high EPU stock prices fall and firms rely more on leverage during the period of high EPU (Pastor, and Veronesi, 2012). Therefore to increase earnings in a declining investment situation the firms increase financial leverage (Brennan and Kraft, 2015).As a result, the theories argue that uncertainty plays a significant role in corporate leverage and financial constraints.

The EPU and company characteristics operate together in two dimensions to establish organizations' leverage targets and, as a result, their actual leverage ratios to adapt partially towards the targets, according to (LI and Qui, 2020). They went on to say that the marginal impacts of a firm's features on its debt ratios do not remain constant over time, but rather alter with EPU, and so could be positive or negative. Because different enterprises have different features, the marginal effects of EPU on debt ratios vary from year to year and might be positive or negative. Firms with positive EPU betas have an adverse impact on the leverage target, whereas firms with negative EPU betas have a progressive influence on the target leverage (Li and Qiu, 2020).

Lee et al (2017) Long-term EPU can have a favorable impact on financial institutions' leverage decisions. To put it another way, To deal with long-term economic policy uncertainties, financial institutions set aside extra capital. When economic policy uncertainty increases, it may be difficult for businesses to obtain funding from financial institutions. Economic policy uncertainty has a broad and widespread impact, and such interactions can amplify or minimize the impact of factors such as peers and banks on individual leverage ratios.

Wu, Zhang, and Zou (2020) reveal a strong favorable link between the EPU and corporate investment in Australia. They propose that the EPU reassures the Australian firms to invest. Their findings show that companies with headquarters in smaller states have a higher beneficial association. The EPU has a stronger link with companies that have more real assets, larger operating cash flow and cash holdings, higher leverage, and the most valuable businesses.

Granville (2019) discovers that the influence of uncertainty is also less substantial for major corporations when it comes to all sorts of debt, which appears to be tied to their better stability and lower risk to creditors. They further argue that due to the greater stability and lesser risks for creditors, the impact of uncertainty on all types of debt is less significant for large enterprises.

Using a sample of Brazilian enterprises, Schwarz and Dalmacio (2020) show that a rise in policy uncertainty results in higher corporate leverage in the subsequent calendar quarter. They predicted that policy uncertainty would impact adversely

on leverage for at minimum the next two and three quarters. According to their findings, as policy uncertainty rises, the book measure of leverage and market measure of leverage rises in the future quarter.

Makololo and Seetharam (2020) studies BRICS countries. They suggest that changes in EPU have an inverse relation with firms' leverage ratios in Russia, Brazil, and South Africa, implying that businesses in those countries cut their debt volumes in times of economic policy uncertainty. However, change in EPU is statistically relevant in China and India, with the results indicating that change in EPU does not influence enterprises' loan selections in these two countries. Short-term borrowers, particularly from local banks in Russia, Brazil, and South Africa, confront a large negative relationship (Makololo and Seetharam; 2020). This shows that when there is uncertainty, these countries' businesses seem to be more inclined to react to it. When the market is uncertain, enterprises in China and India, on the other hand, take advantage of lower-cost lending. Firms in both countries have several flexible financing options, allowing them to increase leverage in uncertain times.

Bajaj et al, (2021) looked at the capital structure dynamics for Indian enterprises and found that EPU has a favorable impact on leverage ratios. As a result of the increasing uncertainty regarding predicted revenues, businesses turn to external sources of funding. However, as the cost of raising external capital rises as a result of EPU, they turn to debt as a less expensive option. This encourages businesses to borrow even more. They further concluded that the growth and size channel the favorable impact of policy shocks on leverage decisions.

As a result, in the time of economic policy shocks, only those enterprises with high growth prospects and have large size will expand their current debt funding. However, there is slower speed estimations in the presence of EPU, because of rising adjustment costs (Bajaj et al, 2021).

Based on the above detailed discussion and related detailed literature we have concluded that economic policy uncertainty has positive influence on corporate capital structure in developing countries, thus in this thesis proposed the following hypothesis.

Hypothesis 1: Economic policy uncertainty has a Positive impact on corporate capital structure.

2.3.2 Size and Leverage

Larger organizations are less risky, more diverse, and have fewer financial troubles to deal with. This effect making it simpler for larger firms to obtain outside financing. Smaller businesses, on the other hand, are riskier, have higher costs, and have information asymmetry issues, making it more difficult to enter the financing market.

For example, the study of Sogorb and Mirza (2005), which used panel data to examine the influence of firm characteristics on the capital structure of Spanish SMEs. they discovered a link between company size and all the debt ratios. According to the findings, major corporations tend to borrow more because of their clout with creditors. Furthermore, these firms provide the market with more dependable and high-quality information, allowing them to gain the trust of creditors. There is also a vast body of work that supports this association, such as Cassar and Holmes (2003), and Sheikh and Wang (2011). This connection is supported by the theory of trade-offs.

However, there is another perspective on these connections. Nunkoo and Boateng, (2010), conducted research and argue that size and leverage have a negative relation. They believe that larger businesses face less moral hazard and that a higher scale allows for more innovation, implies more profits accumulation, fewer information costs, and lower bankruptcy costs, hence less debt is required. The pecking-order idea lends credence to this connection.

A favorable association between leverage and size has been discovered in numerous research. Large companies, according to Marsh (1982), can finance more long-term debt, whereas small companies usually rely on more short-term debt. As a result, sizeable firms can benefit from economies of scale and leverage with creditors. Size has no favorable influence on leverage, according to Ferri and Jones (1979) and Rajan and Zingales (1995). On the other hand, Deesomsak et al. (2004) determine that size is a key element in predicting capital structure outcomes.

G. Huang (2006) and Jung, Kim, and Stulz (1996) founded a favorable association between size and leverage. Wald (1999), also investigated the connection between debt and size. He also demonstrated that this relationship is effective to (US, UK, France, and Japan) firms, however, it has a negative effect on German companies. Booth et al. (2001) investigated and found that size and leverage are positively related.

Bhaduri (2002) identified the size and the cost of financial distress as important determinants of optimal capital structure among Indian firms. J. Chen and Strange (2005) have also demonstrated that debt and size have a positive relationship for China firms. Anwar and Sun (2013) also found the same result for size and leverage. However, Zou and Xiao (2006) report that debt and size are negatively correlated. The same findings have been investigated by (G. Huang, 2006). Shah, Hijazi, and Javed (2004) investigated and discovered that size has a positive effect on the leverage ratio.

According to Sheikh, and Wang (2011), size has a positive association with leverage ratio in terms of capital structure choice of Pakistani Manufacturing firms from 2003 to 2007. Afza and Qayyum (2013) investigated the cement sector in Pakistan from 2007 to 2009 revealed that leverage is positively related to size. Alzomaia (2014) examined publicly traded Saudi Arabian firms from 2000 to 2010 and discovered that size exerted a direct affirmative stimulus on financing structure using a cross-sectional pooled data model.

A. G. Awan and Amin (2014) used panel data techniques on textile firms in Pakistan from 2006 to 2012. Their findings indicate that firm size having a negative impact on the debt ratio of the textile sector. Bassey (2014) investigated the determinants of 28 allied firms in Nigeria from 2005 to 2010, using OLS, and concluded that size has a negative relationship with LEV.

Zhang and Mirza (2015) examined non-financial Chinese firms in China and found that the global financial crisis had a significant favorable impact on firm-level and macroeconomic levels after the financial crisis. He also investigated whether there is a significant change in short-term leverage after a crisis' due to size. Trinh and Phuong (2015) conducted research in Vietnam and empirical findings suggest that

the size of enterprises has a momentous favorable influence on its capital structure in Vietnam. Wagenvoort (2016), discovered that size was positively related to leverage before the crisis. Thus based on the literature proposed the hypothesis.

Hypothesis 2: Size has a significant positive effect on corporate capital structure.

2.3.3 Growth and Leverage

Growth increases the cost of financial stress, reduces free cash flow problems, and exacerbates debt-related agency problems. Stakeholder co-investment is even more important for developing enterprises. Growth prospects, according to the trade-off principle, lessen corporate leverage. The pecking order argument, on the other hand, suggests that companies with more investment prospects should take on more debt while maintaining their profitability. Growth opportunities and leverage are positively associated, according to the pecking order idea.

According to Jensen and Meckling, (1976), and Gaud et. al. (2005), growth opportunities are inversely related to leverage. They claim that businesses with substantial potential for growth should be predominantly backed by internal capital to preserve financial flexibility and decrease loan access as well as agency constraints. Underinvestment causes enterprises to miss out on crucial growth opportunities by transferring shareholder value to creditors, resulting in a hostile environment (Myers, 1977). Because creditors lower the resources available and raise the financing charges for enterprises with more development potential, loan access is restricted for those companies. This negative correlation could also be attributed to the higher expenses of bankruptcy associated with businesses with greater development potential. (Myers, 1984; and Titman and Wessels, 1988).

While Rajan and Zingales, (1995), documented negative association between growth and leverage. Deesomsak et al. (2004), also found the same result between growth and leverage. Despite this, researchers, for example, Hall et al, (2004), and Koksal and Orman, (2015), found a link between growth possibilities and leverage in their investigations. Because increased expansion puts more strain on internal funds, organizations that have strong potential for growth are more likely to turn to

external sources of financing to support those opportunities (Danso et al, 2019). These findings are in line according to the pecking-order theory's predictions and are supported by several empirical research (La Rocca et. al, 2011; and Vo, 2017). In other words, it's difficult to tell the differences between the many associations because the actual data isn't unanimous.

According to Abor and Biekpe (2009), growth is a complicated and time-consuming activity that entails greater long-term debt versus short-term debt, and hence growth opportunities and short-term debt have a considerable adverse association. Several researchers like Cassar and Holmes, (2003), Hall et. al, (2004), and Palacin-Sánchez et, al, (2013) recognized a favorable relationship between growth and leverage. This means that the fastest-growing businesses may lack the money to fulfill future expansion plans, making them increasingly reliant on borrowing. Thus hypothesis is proposed as,

Hypothesis 3: There is significant negative relationship between Growth and corporate capital structure.

2.3.4 Liquidity and Leverage

The current ratio is an extensively used indicator of a firm's liquidity, and a high ratio specifies that a company has a healthy working capital position and adequate resources to fund investments and operations. As a result, borrowing money from outside sources is unnecessary (Chen et al, 2010; and Kumar et al, 2017). There was a negative association between liquidity and debt, according to Desomsak et al, (2004), who investigated the reasons distressing the capital structure of Asian-Pacific firms. They came to the conclusion that because of the decreased risk, firms with significant cash prefer internal financing to external borrowing. Companies with inadequate liquidity, on the other hand, are more likely to rely on debt to meet their short-term commitments. Voulgaris et al. (2004), De Jong et al. (2008), and Sheikh and Wang (2011) all support the assumptions of the pecking-order theory.

Vo (2017) found a favorable correlation between the determinants of Chinese enterprises' capital structure between 2006 and 2015 by using dynamic panel data. The

author makes the case that organizations with strong liquidity may support more debt because they are better able to satisfy short-term requirements. Furthermore, Degryse et al, (2012), discovered a favorable correlation between liquidity and debt. The principle of trade-offs lends credence to this point of view.

Because a higher level of liquidity may imply that a company has enough liquid assets to avoid defaulting on its loan, companies with a higher level of liquidity have lower borrowing costs. As a result, these businesses should take advantage of low-cost borrowing and leverage to grow (Graham, 2000; and, Lipson and Mortal, 2009). Firms with a high amount of liquidity, on the other hand, are less likely to use leverage (Lipson and Mortal, 2009).

Hypothesis 4: There is significant negative relationship between liquidity and corporate capital structure.

2.3.5 Dividend and Leverage

Jensen et. al, (1992), and Faccio, Lang, and Young, (2001), found an adverse correlation between leverage and dividends, in contrast to the positive perspective. Debt will lead to set financial costs, interest, and principal repayment for a company, and this brings the company into liquidation. As a result, in order to maintain a healthy liquidity position and good cash flow, the corporation tends to pay lower dividends. Managers may misapply the Agency Theory argument by using debt and dividends as a substitute mechanism for controlling free cash flow (Jensen, 1986; and Faccio, 2001).

Murray and Vidhan (2009) investigated the implications of dividend policy on capital structure selection and discovered an adverse correlation between leverage and dividends. Mahmud et al, (2009), investigated the effect of dividend distribution on leverage in several Asian countries. They discovered that businesses that limit their earnings distribution prefer equity financing over debt issuance.

According to Benito and Young, (2001), reduced dividends occur when a firm has a high level of leverage, implying a negative link between leverage and payout ratio. While Wandeto, (2005), agrees, Frank and Goyal, (2004), contend that the

payout ratio has a positive impact on leverage. Continuous dividend payments reduce information asymmetry, but businesses may face declining liquidity and insufficient internal capital, requiring management to seek outside funding.

While issuing equity, the companies use dividends to reduce asymmetry in information. John and Williams, (1985) concluded that dividends and leverage have a negative relationship. Studies in developed economies show that dividend payments reduce leverage, while those in developing economies show the opposite (Tong and Green, 2005; Mazur, 2007). Studies backing the Pecking order theory and suggest a direct link in developed economies (Allen, 1993) and contexts like the one of Pakistan (Qureshi, 2009). Qureshi et al (2011) chemical sector of Pakistan and found that profitability, liquidity, dividends, and the age of the company have an adverse relationship with leverage, whereas the size of the company has a positive relation with the dividend. Thus hypothesis is proposed as.

Hypothesis 5: dividend has a significant negative effect on leverage.

Chapter 3

Research Methodology

3.1 Data Description

This thesis empirically investigates the effects of Economic policy uncertainty (EPU) on the corporate capital structure. The data include non-financial active, suspended, and dead firms traded on the Pakistan stock exchange (PSX). Non-financial firms and the firms that do not have more than two years of financial data have been excluded. The data consists of two-span i.e. from 2011-2019 and 2015 and 2019 because the EPU index for Pakistan contains two set of data. One data set is based on four newspaper starts from 2015 till date, while the other is based on two newspaper for the period of 2010 till date. Therefore to check the effect of both EPU indexes two data series has been included in this thesis.

3.2 Sample

The sample data include all firms traded on PSX. After excluding all those firms which did not have financial data for more than two years, the final sample consists of 316 firms for the period 2011-19 while the 342 firms for the period 2015-19. Panel data have been taken from the state bank of Pakistan (SBP) and respective firms' annual reports. The stock price from the PSX and business recorder. The inflation data has been taken from the World Bank website. The EPU data has been taken from the website policy.uncertainty.com developed by Baker et al,

(2016). The EPU data are on monthly basis therefore arithmetic average has been taken to make it annualized. All the financial ratios were trimmed at a 5 percent level to reduce outliers in data. Microsoft Excel has been used for data collection and variables calculation and the statistical software Eviews 9.0 has been used for multiple regression and correlation.

3.3 Variables

In this thesis, the book debt ratio (TDA) and market debt ratio (TMD) are used as dependent variables, and the independent variable in this research thesis is economic policy uncertainty (EPU). The control variables of this thesis are size, liquidity, and market-to-book ratio. The dividend is used as a dummy variable in this study.

3.3.1 Dependent Variables

Most empirical studies looking at the determinants of capital structure used the book debt ratio as a dependent variable, although other researchers used the market value of debt as a proxy for leverage. Myers, (1977), claimed that the book value of debt should be utilized since it is linked to the value of existing assets. However, Taggart, (1977), believed that the book debt and market debt formulations have little difference. The use of both leverage proxies is depending on the study's purpose, according to Rajan and Zingales, (1995).

Espinosa et al., (2012), employed the proxy of the book leverage instead of the market leverage and discovered distinct findings in Latin American countries. Titman and Wessel (1998) used the book value of debt while Graham et al., (2015) used the market value of debt as a proxy of leverage. Li and Qui (2021) studied the influence of EPU on the Capital Structure of US firms and used both leverage proxies book debt and market debt for their analysis. The same measure of leverage was also used by Schwarz and Dalmacio, (2020), in Brazil. Therefore this thesis also used both book debt and market debt as a dependent variable and measured as follows.

Equation for Book debt ratio is as follow

$$TDA = \frac{\text{total Debt}}{\text{Total Asset}} \quad (3.1)$$

Equation for Market debt ratio is as follow

$$TDA = \frac{\text{total Debt}}{\text{Total Asset} + \text{Market value of Equity}} \quad (3.2)$$

3.3.2 Independent Variables

Economic Policy Uncertainty (EPU) was used as an independent variable in this thesis. Several studies, for example, Li and Qui (2021); Khan et al., (2020); Schwarz and Dalmacio (2020), used EPU as an independent variable. This thesis followed the above-mentioned authors and used EPU as an independent variable. EPU index contains several countries' EPU data including Pakistan. Choudhary et al., (2020), established EPU indicators for Pakistan.

Choudhary et al., (2020), constructed the index for each newspaper according to Baker. et, al, (2016) as follows. The number of articles published in each newspaper every month is scaled by the raw count of uncertainty-marked items. The components include monthly statistics, news, and information items from newspapers reporting policy uncertainty, primarily from the country.

The newspapers containing the phrases economic, economy, deficit, regulation, policy, monetary policy, fiscal policy, SBP, central bank, state bank, FBR, policymakers, parliament, government, reserves, taxes, tariffs, deficit, government, legislation, regulation, budget uncertainty, unclear, unpredictable, unstable. They calculate the standard deviation of this scaled count for every newspaper for the period August 2010 to April 2020.

To generate a standardized series for every newspaper, a scaled count was divided with its appropriate standard deviation. To get an aggregate EPU index, they use the arithmetic mean of these normalized measurements for every newspaper each month. Finally, set the mean value of the aggregate EPU index to 100. They

employ the same index-building techniques as Baker et al (2016). The minimum range of EPU is zero having mean value of 100, while the maximum range is infinite.

3.3.2.1 Four Paper Based EPU

The first EPU index of Choudhary et al., (2020) for Pakistan starts From January 2015 to the current moment. The index is based on numbers of published articles in four leading English-language Pakistani newspapers, Business Recorder, Express Tribune, Dawn, and The News. The construction of index is same as discussed above.

3.3.2.2 Two Paper Based EPU

The second version EPU index of Choudhary et al., (2020) for Pakistan starts from August 2010 to the current moment includes two of the four newspaper outlets (Business Recorder and Express Tribune). The construction of index is same as discussed above.

3.3.3 Control Variables

Control variables representing firm characteristics are as follows.

3.3.3.1 Size

Because of their vast amounts of tangible assets, earnings, and ability to diversify, giant corporations are regarded to be less risky. As a result, a direct link between corporate leverage and firm size is predicted by the tradeoff theory strand of argument. Large companies, on the other hand, can generate stronger cash flows, lowering their reliance on external investment, and so pecking order theory assumes an inverse relationship between corporate leverage and firm size (Rajan and Zingales, 1995). In empirical studies, the natural logarithm of total revenues and the natural logarithm of total assets have been employed as proxies to estimate the business size. In Pakistan, studies have looked at both direct and inverse

linkages in a variety of industries and for a variety of leverage proxies (Qureshi, 2009; Sheikh and Qureshi, 2014). Li and Qui, (2021); Ahsan et al.,(2016); Rajan and Zingales, (1995), use a natural log of the total asset for measurement of Size. The same measure of Size is also incorporated in this thesis and size is measure as follows.

$$Size = \text{Natural Log of Total Assets} \quad (3.3)$$

3.3.3.2 Liquidity

According to a Pecking order theory aspect, highly liquid organizations have a better supply of internal capital, and thus there is an inverse relation between leverage and liquidity (Myers and Majluf, 1984). The Tradeoff theory, on the other hand, asserts that highly liquid corporations may be able to issue lower-cost loans because lenders perceive them to be financially sound. As a result, the Tradeoff theory asserts that firm leverage and liquidity are inextricably linked.

To quantify liquidity, empirical studies have used a variety of proxies, such as current assets over current liabilities, (Liu et. al, 2013). Similarly, the majority of quantitative findings on liquidity favor the Pecking order theory aspect of logic (Titman and Wessels, 1988; Qureshi et. al, 2012). Ahsan et al., (2016), calculated liquidity as, current asset over current liability. The same measure of liquidity has been used in this thesis and calculated as follow.

$$Liq = \frac{\text{Current Assets}}{\text{Current Liabilities}} \quad (3.4)$$

3.3.3.3 Growth

The market-to-book asset ratio is the most commonly used indicator of growth chances. As Adam and Goyal, (2008), show, it is also the most reliable. On the other hand, stock mispricing may result in a higher market-to-book ratio. If market timing drives capital structure decisions, a higher market-to-book ratio should reduce leverage as companies use equity issuances to take advantage of

stock mispricing (Frank and Goyal, 2009). Several scholars, including Li and Qui, (2021); Im et al., (2020); Frank and Goyal, (2009), have utilized the market-to-book ratio as a proxy for growth. In this thesis, the market-to-book ratio is utilized as a proxy for growth and is calculated as follow.

$$\text{Market to Book Ratio} = \frac{\text{Book Value of Debt} + \text{Market Value of Equity}}{\text{Book Value of Total Assets}} \quad (3.5)$$

3.3.3.4 Dividend

The dividend is the profit due to stockholders, which is calculated by dividing the dividend by the number of outstanding shares. Dividends are payments made to shareholders as compensation for the time and risk they took in investing with a company. Colak et al., (2018) used the dividend as a dummy variable in their research. Cao et al (2013); Li and Qui (2021), also used the dividend as a dummy variable in their studies. Therefore this thesis used Dividend announcement as a dummy variable. The dividend is a dummy variable, which takes the value of one if a firm announce a cash dividend and zero otherwise.

$$\text{Dividend} = \text{Dummy Variable (0, 1)}$$

3.4 List of Variables

TABLE 3.1: List of Variables

DV/IV	Name	Abbreviation	Sources	Expected +/-
Dependent Variable	TDA	Book Debt Ratio	Li and Qui (2021)	
Dependent Variable	TMD	Market Debt Ratio	Schwarz and Dalmacio (2020)	
Independent Variable	EPU	Economic policy uncertainty	Li and Qui (2021)	Positive
Control Variable	S	Size	Li and Qui (2021)	Positive
Control Variable	Liq	Liquidity	Ahsan, Wang and Qureshi (2016)	Negative
Control Variable	MTB	Market to Book Ratio	Im, Kang and Shon (2020)	Negative
Dummy Variable	Div	Dividend	Li and Qui (2021)	Negative

3.5 Econometric Model

The following are the components in the Model of this thesis

3.5.1 Panel Data Analysis

Panel data is used in this thesis study. Panel data can be modeled in three ways. These models were used to analyze the data in the study. In terms of the intercept, each model's assumptions differ from one another. Before moving to the fixed-effect regression model certain tests have been done to estimate the proper model for regression analysis.

There are three models for regression analysis. The first model is the Common Coefficient Effect Model which has a persistent intercept over the whole period and cross-section. The second model is the Fixed Effect Model. This means that the intercept varies across the whole cross-section. The third model is the Random Effect Model. This shows how the intercept changes with time throughout the whole cross-section.

3.5.2 Common Coefficient Model

The first model of common coefficient model. It has constant intercept across all cross sections and time period. The Common effect model general equation is:

$$Y_{i,t} = \alpha_0 + \beta X_{i,t} + \mu_{i,t} \quad (3.6)$$

Where, X is dependent variable is X and The Y represents the list of independent variables and μ is error term. Because capital structure represents two segments which are book debt ratio and market debt ratio,therefor two equations tested to find the effect of EPU on capital structure.

$$CS_{it} = \beta_0 + \beta_1(EPU)_{it} + \beta_2(S)_{it} + \beta_3(Liq)_{it} + \beta_4(MTB)_{it} + \beta_5(DIV)_{it} + \mu_{it} \quad (3.7)$$

3.5.3 Fixed Effect Test

The second model explains the intercept is change for all cross sections. The second model is Fixed effect Model. General equation of fixed effect model:

$$Y_{it} = \alpha_i + \beta(X)_{it} + \mu_{it} \quad (3.8)$$

In this study, Equation for effect of trade credit on company's profitability is.

$$CS_{it} = \alpha_i + \beta_1(EPU)_{it} + \beta_2(S)_{it} + \beta_3(Liq)_{it} + \beta_4(MTB)_{it} + \beta_5(DIV)_{it} + \mu_{it} \quad (3.9)$$

3.5.4 Random Effect Model

In a random effect model, the intercept is treated as an error factor that has no bearing on the cross sections (companies). This model explains the differences between the firms. It has the following advantages.

In compared to the fixed effect model, the random effect model has fewer parameters to estimate. It allows for the insertion of more independent variables with the same amount of observations.

General equation of random effect model:

$$Y_{it} = \alpha_0 + \beta_1(X)_{it} + \beta_k(X)_{kit} + (V_i + \mu_{it}) \quad (3.10)$$

In this study: The random effect model used mention below.

$$CS_{it} = \beta_0 + \beta_1(EPU)_{it} + \beta_2(S)_{it} + \beta_3(Liq)_{it} + \beta_4(MTB)_{it} + \beta_5(DIV)_{it} + (V_i + \mu_{it}) \quad (3.11)$$

3.5.5 Redundant Fixed Effect Test

Between the common and fixed-effect models, the redundant fixed effect test was used. The P value tell that which one is the most effective model. If the P value is greater than 5, it means common coefficient model will be used, and if it is lower than 5, then fixed effect model will be used. In the case of this thesis, the test response was significant with a P-value less than 0.05, therefor fixed effect model was employed. If the response was not significant i.e. P-value was greater than 0.05, common effect models would be utilized. After the conclusion of this test, another test was run to pick between fixed effect and random effect model regression.

3.5.6 Hausman Test

In panel data analysis, the Hausman test was used to determine whether to employ a fixed-effects or random-effects model. The results of this test were significant with a P-value was less than 0.05, so the fixed effect model was utilized for data analysis.

Chapter 4

Results and Discussion

4.1 Analysis for the Period 2015-19

4.1.1 Descriptive Statistics

TABLE 4.1: Descriptive Statistics for the period 2015-19

	TMD	TDA	EPU	S	LIQ	MTB	DIV
Mean	0.173400	0.579407	4.468695	15.59454	1.256737	6.307057	0.550579
Median	0.123060	0.556550	4.556463	15.55232	1.107179	4.299447	1.000000
Maximum	0.699397	1.665816	4.833357	20.26025	4.320915	32.51833	1.000000
Minimum	0.010050	0.169863	4.118466	9.563459	0.108497	1.261319	0.000000
Std. Dev.	0.150460	0.244777	0.268053	1.745887	0.707931	5.616827	0.497627
Skewness	1.275643	1.191573	-0.09648	0.013921	1.274894	1.916775	-0.20336
Kurtosis	4.053676	5.614087	1.469196	2.920627	5.115360	6.842587	1.041355
Jarque-Bera	411.1246	675.1718	128.4528	0.381775	592.2555	1589.697	215.9256
Observations	1295	1295	1295	1295	1295	1295	1295

Table 4.1 shows the descriptive statistics of all variables which are used in this study, the mean value of TMD is 0.173400 and the median value is 0.123060. The maximum and minimum values vary between 0.699397 and 0.010050. The variations that occur between maximum and minimum are due to the increase and decrease of equity value. In the sample period, some firms have negative values of equity. The standard deviation of TMD is 0.150460. The mean value of TDA is 0.579407 and having a median value of 0.556550. The maximum value of TDA is 1.665816 which is greater than 1, which means that some firms have negative equity during the analysis period. The minimum value is 0.169863 while the

standard deviation is 0.244777. The average value of the EPU is 4.468695 which varies between the maximum and minimum range of 4.833357 to 4.118466 with a standard deviation of 0.268053. The variation between maximum and minimum show the level of uncertainty in the country. While the median value is 4.556463. The average value of SIZE is 15.59454 with a median value of 15.55232. The maximum and minimum of 20.26025 and 9.563459 respectively and the standard deviation is 1.745887.

The mean value of LIQ is 1.256737 and the median value is 1.107179. The maximum and minimum values are 4.320915 and 0.108497 and the standard deviation is 0.707931. The maximum liquidity for firms shows that these firms have four times more current assets than liquidity while the minimum value shows the deficiency in the current asset. MTB has an average value of 6.307057 and has a median value of 4.299447. The maximum and minimum values are 32.51833 and 1.261319 and the standard deviation value is 5.616827. The maximum value of MTB shows that firms have more growth opportunities. The mean value DIV is 0.550579 and the median value is 1. The maximum and minimum values vary between 1 and 0 and the standard deviation is 0.497627.

4.1.2 Correlation Matrix Analysis

TABLE 4.2: Correlation Matrix for the period 2015-19

	TMD	TDA	EPU	S	LIQ	MTB	DIV
TMD	1						
TDA	0.60675	1					
EPU	0.03991	0.01627	1				
S	-0.08696	-0.0486	0.10103	1			
LIQ	-0.49164	-0.613	-0.0264	0.10871	1		
MTB	-0.60895	-0.1922	-0.0642	0.11574	0.2857	1	
DIV	-0.43084	-0.3372	0.02117	0.39208	0.40932	0.31125	1

Table 4.2 shows the relationship among variables. Pearson correlation test was adopted to explain the direction and strength of the relationship. TDA and EPU shows positive correlation with TMD while S, LIQ, MTB, and DIV show negative correlation with TMD. EPU shows positive correlation with TDA while S, LIQ,

MTB, and DIV show negative correlation with TDA. SIZE shows positive correlation with EPU. While LIQ and MTB show negative correlation with EPU. DIV shows positive relationship with EPU. LIQ, MTB, and DIV all show positive relation with Size. MTB and DIV have positive correlation with LIQ. The correlation between DIV and MTB is positive.

4.1.3 Effect of EPU on Market Debt (TMD)

TABLE 4.3: Effect of EPU on Market Debt (TMD) for the period 2015-19

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.28745	0.117012	-2.4566	0.0142
EPU	0.02158	0.00735	2.93602	0.0034
S	0.030335	0.008284	3.66172	0.0003
LIQ	-0.02633	0.005754	-4.576	0.0000
MTB	-0.00833	0.000656	-12.695	0.0000
DIV	-0.03128	0.005801	-5.3928	0.0000
R-squared	0.891991	Durbin-Watson stat	1.73243	
Adjusted R-square	0.859861			
F-statistic	27.76148			
Prob(F-statistic)	0.0000			

The regression analysis of the equation, shown in table (4.3), shows that all of the variables are significant with the independent variable, which is the market debt ratio, in this study. R-square value is 89.19 percent, it shows the strong descriptive power of this model. The adjusted R-square value is 85.98 percent and indicates variation occurred independent variable (TMD) due to independent variable (EPU) in the presence of a set of control variables. The findings show that these factors account for 85 percent of the variation in the regression equation. The Durbin Watson test demonstrates the autocorrelation between sets of data. In this result, the value of Durbin Watson is 1.73, which indicates no autocorrelation in the study.

The coefficient value of EPU is (0.021580) and the p-value is (.0034). It is indicating that there is a significant positive relationship between TMD and EPU which indicates that if EPU increases the firm debt also increases. The results show that a 1% increase in EPU increases the TMD by 0.2%. The coefficient value of Size

is (0.030335) and the p-value is (0.0003). The size (S) shows a significant positive relationship with TMD. It shows that firms with larger sizes can tend to acquire more debt. The coefficient value of LIQ is (-0.026328) and the p-value is (.0000) Liquidity (LIQ) shows a significant negative on the debt value of the company. The coefficient value of MTB which represents long-term growth prospects is (-0.008332) and the p-value is (.0000). The MTB shows significant negative relation with TMD. The coefficient value of Div is (-0.031284) and the p-value is (.0000) Dividend, which is a dummy variable in the study also shows significant negative relation with TMD.

4.1.4 Effect of EPU on Book Debt (TDA)

TABLE 4.4: Effect of EPU on Book Debt (TDA) for the period 2015-19

Variable	Coefficient	Std. Error	t-Statistic	Prob
C	1.077386	0.234121	4.601839	0.0000
EPU	0.077369	0.01582	4.890721	0.0000
S	-0.039513	0.015739	-2.51053	0.0123
LIQ	-0.159036	0.009896	-16.0701	0.0000
MTB	-0.001739	0.000978	-1.77744	0.0759
DIV	-0.027144	0.00834	-3.25456	0.0012
AR(1)	0.346935	0.037146	9.339877	0.0000
R-squared	0.946839	Durbin-Watson stat		2.29926
Adjusted square	R- 0.924663			
F-statistic	42.69699			
Prob(F-statistic)	0.0000			

The regression analysis of the equation, shown in the table above (4.4), shows that all of the variables are significant with the independent variable, which is the book debt ratio, in this study. R-square value is 94.68 percent it shows the strong descriptive power of this model. The adjusted R-square value is 92.46 percent and indicates variation occurred in the dependent variable (TDA) due to the independent variable (EPU) in the presence of a set of control variables.

The Durbin Watson test is a statistical test that demonstrates that autocorrelation between sets of data. In this result, the value of Durbin Watson was low

that indicates the existence of autocorrelation. To remove autocorrelation AR (1) term was included. After AR (1) Durbin Watson's value increased to 2.29, which indicates no autocorrelation in the study.

The coefficient value of EPU is (0.077369) and the p-value is (.0000). It is indicating that there is a significant positive relationship between TDA and EPU which indicates that if EPU increases the firm debt also increases. The coefficient value of Size is (-0.039513) and the p-value is (0.0123). The size (S) shows a significant negative relationship with TMD. It shows that firms with larger sizes reduce debt levels. The coefficient value of LIQ is (-0.159036) and the p-value is (.0000) Liquidity (LIQ) shows a significant negative on the debt value of the company. This means that firms having more liquid assets or cash in hand need a smaller amount of debt. This means that firms having more liquid assets or cash in hand need a lesser amount of debt. The coefficient value of MTB which represents long-term growth prospects is (-0.001739) and the p-value is (.0759). The MTB shows negative relation with TMD but the relation is significant at the 10% level. The result shows that firms that have growth opportunities, less rely on debt. The result shows that firms that have growth opportunities, less rely on debt. The coefficient value of Div is (-0.027144) and the p-value is (.0012) Dividend, which is a dummy variable in the study also shows significant negative relation with TDA.

4.1.5 Discussion for the Period of 2015-19

The regression results shows positive relation between EPU and both proxies of capital structure. These results approve the first hypothesis that EPU has a positive influence on capital structure. The results clearly indicated that when EPU in the country increases the firms increases their debt level. These results are in line with Schwarz and Dalm'acio (2020), who stated that there is a positive relationship between policy uncertainty and corporate leverage. They further argue that market leverage is affected two and three quarters ahead due to the policy uncertainty. The results also approve tradeoff theory, as uncertainty increases the cost of debt and equity also rise, but debt has tax benefits therefore firms prefer debt over equity, Bajaj et al, (2021). According to pecking order theory, there

is asymmetry of information between investors and managers and during uncertainty, the higher uncertainty firms face more asymmetric information and having more production cost information. Therefore these firms prefer debt over equity which implies a positive relation between leverage and uncertainty (Im et al 2020).

The results also approve the Market timing theory, suggest that during high EPU stock prices fall and firms rely more on leverage during the period of high EPU (Pastor, and Veronesi, 2012). Therefore to increase earnings in a declining investment situation the firms increase financial leverage (Brennan and Kraft, 2015). Lee et al. (2017), Kotcharin and Maneenop (2018) and Schwarz and Dalm'acio (2020) also found positive relation between EPU and capital structure.

Size shows different results relation with the proxies of capital structure. Size have positive and significant relation with market debt ratio, indicating that large size firms have more acces to debt. This result approve the second hypothesis is in line with Li and Qui (2020), who argue that the firms having large sizes are well diversified and have low bankruptcy risk. Sogorb-Mira (2005), Cassar and Holmes (2003), and Balios et al (2016) also found the same result for size and leverage. Sheikh and Wang (2011), and Afza and Qayyum (2013) also found a positive relationship between size and leverage.

However the size shows negative relation to book debt ratio. This result illustrates that larger firms does not rely on external debt. This result reject the second hypothesis for book debt ratio however the result is in line with A. G. Awan and Amin (2014) who studied the textile sector of Pakistan and found negative relation of size to debt. Firms that have a larger size usually face low information and bankruptcy cost and have more profit thereby use less debt Nunkoo and Boateng (2010). Bassey (2014) also found a negative relation between size and leverage.

Liquity in the regression illustrate negative result for both market debt ratio and book debt ratio. This means that firms having more liquid assets or cash in hand need a lesser amount of debt. These results approve the third hypothesis are in line with Lipson and Mortal, (2009), who stated that high-liquid firms are less dependent on debt. According to Deesomsak et al. (2004), firms having high liquidity prefer internal financing and thus reduce the level of debt. Sheikh and

Wang (2011) also found a negative relationship between liquidity and leverage in Pakistan.

The regression results shows negative relation between growth opportunities and proxies of capital structure. The results indicate that firms that have more growth opportunities, less rely on debt. These results approve the fourth hypothesis and are in line with the studies of Rajan and Zingales, (1995). LI and Qui (2020), and Bajaj et al (2021) also found negative relation of growth with leverage. Qureshi et al (2011) investigated the chemical sector in Pakistan and found an inverse relationship between growth and leverage.

Dividend announcement , which is a dummy variable, shows negative relation with both market debt ratio and book debt ratio. These results indicate that when firms make dividend announcement, they have generated more revenues and therefore they reduces their debt level. These results approve the fifth hypothesis and are in line with Qureshi et al (2011) who found a negative relation between dividends and leverage. This means that firms only announce dividend when they have extra cash. These firms do not need external financing which in turn reduces debt thus supports the pecking order theory. Jensen et al. (1992) and Faccio, Lang, and Young (2001), and Qureshi (2009) also found the same result.

4.2 Analysis for the Period 2011-19

4.2.1 Descriptive Statistics

Table 4.5 shows the descriptive statistics of all variables that are used in this study, the mean value of TMD is 0.210409 and the median value is 0.156968. The maximum and minimum values vary between 0.761190 and 0.011211 and the standard deviation is 0.175367. The variations that occur between maximum and minimum are due to the increase and decrease of equity value. In the sample period, some firms have negative values of equity. The mean value of TDA is 0.584779 and having a median value of 0.574898. The maximum and minimum values of TDA which is a dependent variable in our study are 1.495702 and 0.172338 respectively and the standard deviation is 0.226328. The maximum value of TDA is greater than

1, which means that some firms have negative equity during the analysis period. The average value of the EPU is 4.504928 which varies between the maximum and minimum range of 4.866774 to 4.135970 with a standard deviation of 0.230982. While the median value is 4.595394. The variation between maximum and minimum of EPU shows the level of uncertainty in the country. The average value of SIZE is 15.43760 with a median value of 15.37529. The maximum and minimum of 20.26025 and 9.629840 respectively and the standard deviation is 1.703716.

TABLE 4.5: Descriptive statistics Analysis for the period 2011-19

	TMD	TDA	EPU	S	LIQ	MTB	DIV
Mean	0.210409	0.584779	4.504928	15.43760	1.274845	5.332786	0.552015
Median	0.156968	0.574898	4.595394	15.37529	1.117155	3.550309	1.000000
Maximum	0.761190	1.495702	4.866774	20.26025	4.052827	27.99671	1.000000
Minimum	0.011211	0.172338	4.135970	9.629840	0.129394	1.037407	0.000000
Std. Dev.	0.175367	0.226328	0.230982	1.703716	0.685704	4.929356	0.497404
Skewness	1.079566	0.822081	-0.193317	0.103915	1.279838	1.996511	-0.209195
Kurtosis	3.386055	4.465833	1.886800	2.952100	4.916845	6.984241	1.043763
Jarque-Bera	427.7682	431.4181	123.4787	4.044616	909.2830	2829.187	355.8370
Observations	2134	2134	2134	2134	2134	2134	2134

The mean value of LIQ is 1.274845 and the median value is 1.117155. The maximum and minimum values are 4.052827 and 0.129394. The maximum liquidity for firms shows that these firms have four times more current assets than liquidity while the minimum value shows the deficiency in the current asset. The standard deviation LIQ is 0.685704. MTB has an average value of 5.332786 and has a median value of 3.550309.

The maximum and minimum values are 27.99671 and 1.037407 and the standard deviation value is 4.929356. The maximum value of MTB shows that firms have more growth opportunities while the minimum value shows the reduction in opportunities. The mean value DIV is 0.552015 and the median value is 1. The maximum and minimum values vary between 1 and 0 and the standard deviation is 0.497404.

4.2.2 Correlation Matrix Analysis

Table 4.6 shows the relationship among variables. Pearson correlation test was adopted to explain the direction and strength of the relationship. TDA and EPU

shows positive correlation with TMD while S, LIQ, MTB, and DIV show negative correlation with TMD. EPU shows positive correlation with TDA while S, LIQ, MTB, and DIV show negative correlation with TDA. SIZE and DIV show a positive relationship with EPU. While LIQ and MTB show negative relation with EPU. LIQ, MTB and DIV all variables show a positive relation with Size. MTB and DIV have a positive correlation with LIQ. The Correlation between DIV and MTB is positive.

TABLE 4.6: Correlation Matrix Analysis for the period 2011-19

	TMD	TDA	EPU	S	LIQ	MTB	DIV
TMD	1						
TDA	0.62684	1					
EPU	0.06587	0.02771	1				
S	-0.1027	-0.0223	0.05768	1			
LIQ	-0.4801	-0.6204	-0.0175	0.0361	1		
MTB	-0.6218	-0.2457	-0.0629	0.15595	0.33113	1	
DIV	-0.4256	-0.3444	0.01937	0.32292	0.3904	0.33028	1

4.2.3 Effect of EPU on Market Debt (TMD)

TABLE 4.7: Effect of EPU on Market Debt (TMD) for the period 2011-19

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.016278	0.114132	-0.142627	0.8866
EPU	0.016019	0.007085	2.260977	0.0239
S	0.014251	0.007664	1.859362	0.0631
LIQ	-0.005001	0.001404	-3.562851	0.0004
MTB	-0.007557	0.00049	-15.43632	0.0000
DIV	-0.035231	0.00523	-6.735682	0.0000
AR(1)	0.459916	0.017766	25.88691	0.0000
R-squared	0.862319	Durbin-Watson stat	2.031808	
Adjusted R-square	0.839879			
F-statistic	38.42764			
Prob(F-statistic)	0.0000			

Regression analysis of the equation, shown in the table above (4.3.1), shows that all of the variables are significant to the independent variable, which is the market debt ratio, in this study. R-square value is 86.23percent it shows the strong descriptive power of this model. The adjusted R-square value is 83.98 percent and

indicates variation occurred independent variable (TMD) due to the independent variable (EPU) in the presence of a set of control variables. In this result the value of Durbin Watson was low that indicates the existence of auto-correlation. To remove auto-correlation AR (1) term was included. After AR (1) Durbin Watson's value increased to 2.03, which indicates no auto-correlation in the study.

The coefficient value of EPU is (0.016019) and the p-value is (.0239). It indicated that there is a significant positive relationship between TDA and EPU which indicates that if EPU increases the firm debt also increases. The results show that a 1% increase in EPU increases the TMD by 0.16%. The coefficient value of Size is (0.014251) and the p-value is (0.0631). The size (S) shows a significant positive relationship with TMD. It shows that firms with larger sizes can tend to acquire more debt. The coefficient value of LIQ is (-0.005001) and the p-value is (.0004) Liquidity (LIQ) shows a significant negative on the debt value of a company. This means that firms having more liquid asset or cash in hand, they reduce the amount of debt. The coefficient value of MTB which represents long-term growth prospects is (-0.007557) and the p-value is (.0000). The MTB shows significant negative relation with TMD. The result shows that firms that have growth opportunities, less rely on debt. The coefficient value of Div is (-0.035231) and the p-value is (.0000) Dividend, which is a dummy variable in the study also shows significant negative relation with TMD.

4.2.4 Effect of EPU on Book Debt (TDA)

The regression analysis of the equation, shown in the table above (4.3.1), shows that all of the variables are significant to the independent variable, which is the market debt ratio, in this study. R-square value is 90.58percent it shows the strong descriptive power of this model. The adjusted R-square value is 88.79 percent and indicates variation occurred independent variable (TMD) due to the independent variable (EPU) in the presence of a set of control variables. The Durbin Watson test is a statistical test that demonstrates that autocorrelation between sets of data. In this result the value of Durbin Watson was low that indicates the existence of autocorrelation. To remove autocorrelation AR (1) term was included. After AR

TABLE 4.8: Effect of EPU on book Debt (TDA) for the period 2011-19

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.480905	0.173157	2.77728	0.0055
EPU	0.01728	0.008004	2.158782	0.031
S	0.013205	0.011423	1.155973	0.2479
LIQ	-0.115696	0.006387	-18.11509	0.0000
MTB	-0.003026	0.000771	-3.926262	0.0001
DIV	-0.020658	0.005643	-3.660637	0.0003
AR(1)	0.621544	0.02214	28.07384	0.0000
R-squared	0.90589	Durbin-Watson stat		2.03496
Adjusted R-squared	0.887958			
F-statistic	50.519			
Prob(F-statistic)	0.0000			

(1) Durbin Watson's value increased to 2.03, which indicates no autocorrelation in the study.

The coefficient value of EPU is (0.017280) and the p-value is (.0310). The result indicated that there is a significant positive relationship between TDA and EPU which indicates that if EPU increases the firm debt also increases. The results show that one point increase in EPU increases the TDA by 0.1%.

The coefficient value of Size is (0.013205) and the p-value is (0.2479). The size (S) shows a positive but insignificant relationship with TMD. It shows that firms with larger sizes can tend to acquire more debt.

The coefficient value of LIQ is (-0.115696) and the p-value is (.0000) Liquidity (LIQ) shows a significant negative on the debt value of the company. This means that firms having more liquid assets or cash in hand need a lesser amount of debt. The coefficient value of MTB which represents long-term growth prospects is (-0.003026) and the p-value is (.0001). The MTB shows significant negative relation with TMD. The result shows that firms that have growth opportunities, less rely on debt.

The coefficient value of Div is (-0.020658) and the p-value is (.0000). Dividend, which is a dummy variable in the study also shows significant negative relation with TMD. This means that firms mostly reduces debt whenever they announces dividend.

4.2.5 Discussion for the Period of 2011-19

The regression results shows positive relation between EPU and both proxies of capital structure. These results approve the first hypothesis that EPU has a positive influence on capital structure. The results clearly indicated that when EPU in the country increases the firms increases their debt level. These results are in line with Schwarz and Dalm'acio (2020), who stated that there is a positive relationship between policy uncertainty and corporate leverage. They further argue that market leverage is affected two and three quarters ahead due to the policy uncertainty.

The results also approve tradeoff theory, as uncertainty increases the cost of debt and equity also rise, but debt has tax benefits therefore firms prefer debt over equity, Bajaj et al, (2021). According to pecking order theory, there is asymmetry of information between investors and managers and during uncertainty, the higher uncertainty firms face more asymmetric information and having more production cost information. Therefore these firms prefer debt over equity which implies a positive relation between leverage and uncertainty (Im et al 2020).

These results also approve the Market timing theory, suggest that during high EPU stock prices fall and firms rely more on leverage during the period of high EPU (Pastor, and Veronesi, 2012). Therefore to increase earnings in a declining investment situation the firms increase financial leverage (Brennan and Kraft, 2015). Lee et al. (2017), Kotcharin and Maneenop (2018) and Schwarz and Dalm'acio (2020) also found positive relation between EPU and capital structure. Size have positive and significant relation with both market debt ratio and book debt ratio, indicating that larger firms have more acces to debt. These results approve the second hypothesis and are in line with Li and Qui (2020), who argue that the firms having large sizes are well diversified and have low bankruptcy risk. Sogorb-Mira (2005), Cassar and Holmes (2003), and Balios et al (2016) also found the same result for size and leverage. Sheikh and Wang (2011), and Afza and Qayyum (2013) also found a positive relationship between size and leverage.

Liquity in the regression illustrate negative result for both market debt ratio and book debt ratio. This means that firms having more liquid assets or cash in hand

need a lesser amount of debt. These results approve the third hypothesis and are in line with Lipson and Mortal, (2009), who stated that high-liquid firms are less dependent on debt. According to Deesomsak et al. (2004), firms having high liquidity prefer internal financing and thus reduce the level of debt. Sheikh and Wang (2011) also found a negative relationship between liquidity and leverage in Pakistan.

The regression results shows negative relation between growth opportunities and proxies of capital structure. The results indicate that firms that have more growth opportunities, less rely on debt. These results approve the fourth hypothesis The results are in line with the studies of Rajan and Zingales, (1995). LI and Qui (2020), and Bajaj et al (2021) also found negative relation of growth with leverage. Qureshi et al (2011) investigated the chemical sector in Pakistan and found an inverse relationship between growth and leverage.

Dividend announcement , which is a dummy variable, shows negative relation with both market debt ratio and book debt ratio. These results indicate that when firms make dividend announcement, they have generated more revenues and therefore they reduces their debt level. These results approve the third hypothesis and are in line with Qureshi et al (2011) who found a negative relation between dividends and leverage. This means that firms only announce dividend when they have extra cash. These firms do not need external financing which in turn reduces debt thus supports the pecking order theory. Jensen et al. (1992) and Faccio, Lang, and Young (2001), and Qureshi (2009) also found the same result.

Chapter 5

Conclusion

Capital structure is an important subject when it comes to corporations injecting funds or diversifying their interests. The amount of stock and loan capital invested in domestic and foreign businesses has an impact on profitability as well as the company's ability to weather economic misfortune, such as a recession. Businesses are exposed to a variety of risks depending on the macroeconomic environment. According to the literature, enterprises' financing decisions change as the country's macroeconomic changes happen, and as a result, capital structure choices change as well. The level of debt and equity changes as the phases of the economic cycle shift, according to the Hacbarth et al (2006) model. Furthermore, these changes affect the shareholder threshold they chose, resulting in a shift in capital structure. According to Chen (2010), variations in the business cycle affect anticipated growth rates, economic uncertainty, and risk premium. All of these variables contribute to the capital structure's decision to be dynamic and state-dependent.

Economic policies, according to Zhang et al. (2015), frequently cause a significant level of uncertainty as a result of policy decisions and implementation. These regulations have a significant impact on the financial market and corporate behaviour, such as investment decision minimization or exaggeration. On the other side, the value of EPU in capital structure decisions has been understudied. EPU had been mostly overlooked by capital structure academics and ideas until recently. Recent empirical research has begun to address this hole, with a particular focus on the effects of policy uncertainty on company investment decisions. For example, Julio

and Yook (2012) discovered that during election years, when political uncertainty is high, corporations reduce their investment spending.

This study examines the role of economic policy uncertainty in influencing the capital structure decision in the presence of firm characteristics that have been taken as a controlling factor. All non-financial firms listed on PSX have taken for this study. The data consists of two periods from 2015-19 and 2011-19. I have used the EPU news-based measure for Pakistan a developing country in South Asia. The EPU index contains two types of index; the first measure is based on two newspapers from 2010 to the present and the second is based on four newspapers based for the period 2015 till date. Both measures of EPU were taken for this study. Therefore two spans of data are taken as samples for the analysis.

The regression showed significant result for both the period. Based on results it is documented that an increase in EPU increases both market and book debt, however, the magnitude of the second measure i.e. for the period of 2015-19, is greater. When the uncertainty is high, the firms opt for external financing due to the uncertain expected returns. In an uncertain situation, debt is being a cheaper source of finance than equity thus firms go for debt financing as result increases leverage (Bajaj et al, 2021).

The results indicate that there are alternative sources of debt financing available in Pakistan during high uncertainty. This indicates that the country is not overwhelmed by the EPU because the firms know that the uncertainty is temporary and make this uncertainty their opportunity for growing business (Schwarz and Dalm´acio; 2020). The overall result is consistent with Lee et al (2017), (Schwarz and Dalm´acio; 2020);Bajaj et.al, (2021).

Consistent with trade-off theory prediction, the results show that those firms having larger size mostly use debt financing in both the period, however size have only negative influence to book debt in the shorter period. According to the pecking order theory prediction, the results indicated that the firms with greater growth opportunity, and have more liquidity and firms made cash dividend rely less on debt financing. Thus the results show that only those firms having larger sizes can take benefit of uncertainty and borrow more during the period when EPU is high.

Market timing theory, suggest that during high EPU stock prices fall and firms rely more on leverage during the period of high EPU . Therefore to increase earnings in a declining investment situation the firms increase financial leverage.

5.1 Policy Recommendations

The research thesis contributes to the literature by providing understandings of economic policy uncertainty's effect on capital structure in a developing country. The key findings suggest that economic policy uncertainty have an asymmetric effect on Pakistani firms financing decision. The government and policymakers must realize that policy changes they make have an impact on corporate financing practices therefore employ more carefulness in making changes in economic policy. These findings are also helpful for the managers, investors, and creditors to understand the potential impact of economic policy uncertainty on capital structure decisions which in turn impact the decision of these stakeholders.

5.2 Limitations and Future Directions

Despite several practical implications, this research thesis also has some limitations. This thesis analyzes only non-financial Pakistani firms listed on the Pakistan stock exchange. Therefore the implication is only limited to Pakistan and non-financial firms. Additionally, research was confined to Pakistan non financial firms. The findings of this reasarch cannot be applied to all Pakistani business because these findings are only applied to that firms which are listed on Pakistan stock exchange and and provide financial data at a regular basis.

5.3 Future Directions

The scope of this study is restricted to a particular developing country (Pakistan). According to the study, many more countries should be explored for Economic policy uncertainty and Capital structure. In this paper, study analyse two proxys

for capital structure which is market debt and book debt ratios except that more ratios like debt to equity, short term debt to asset ratios and long term debt to asset ratios can use for future studies. Future studies may examine the economic policy uncertainty effect on financial firms and a cross-country analysis may give a better understanding due to different financial environments. Yearly data used in this study, future studies can also consider quarterly data.

Bibliography

- Ahsan, T., Wang, M., and Qureshi, M. A. (2016). How do they adjust their capital structure along their life cycle? An empirical study about capital structure over life cycle of Pakistani firms. *Journal of Asia Business Studies*.
- Baker, M. and Wurgler, J. (2002). Market Timing and Capital Structure. *Journal of Finance*, 57(1) 1–32.
- Baker, S. R., Bloom, N., and Davis, S. J. (2016). Measuring economic policy uncertainty. *The Quarterly Journal of Economics*, 131(4), 1593–1636.
- Barraza, S., and Civelli, A. (2020). Economic policy uncertainty and the supply of business loans. *Journal of Banking and Finance*, 121, 105983.
- Baum, C.F., Caglayan, M., Ozkan, N., Talavera, O. (2006). The impact of macroeconomic uncertainty on non-financial firms' demand for liquidity. *Review of Financial Economics*, 15 (4), 289–330.
- Baum, C.F., Stephan, A., Talavera, O. (2009). The effects of uncertainty on the leverage of nonfinancial firms. *Economic Inquiry*, 47 (2), 216–225.
- Beckman, C. M., Haunschild, P. R. and Phillips, D. J. (2004). Firm-Specific Uncertainty, Market Uncertainty, and Network Partner Selection. *Organization Science*, 15(3), pp.259–275.
- Bernanke, B. S. (1983). Irreversibility, uncertainty, and cyclical investment. *The Quarterly Journal of Economics*, 98(1), 85–106.
- Bhamra, H. S., Kuehn, L. A., and Strebulaev, I. A. (2010). The aggregate dynamics of capital structure and macroeconomic risk. *The Review of Financial Studies*, 23(12), 4187-4241.

- Billett, M. T., King, T. H. D., and Mauer, D. C. (2007). Growth opportunities and the choice of leverage, debt maturity, and covenants. *The Journal of Finance*, 62(2), 697-730.
- Bloom, N. (2009). The impact of uncertainty shocks. *Econometrica*, 77 (3), 623–685.
- Bloom, N. (2014). Fluctuations in uncertainty. *The Journal of Economic Perspectives*, 28(2), 153–175.
- Bloom, N., Bond, S., van Reenen, J. (2007). Uncertainty and investment dynamics. *Review of financial Studies*, 74 (2), 391-415.
- Bradley, D., Pantzalis, C., and Yuan, X. (2016). Policy risk, corporate political strategies, and the cost of debt. *Journal of Corporate Finance*, 40, 254–275.
- Brogaard, J., Detzel, A. (2015). The asset-pricing implications of government economic policy uncertainty. *Management Science*, 61, 3–18.
- Caglayan, M., and Rashid, A. (2014). The response of firms leverage to risk: Evidence from UK public versus nonpublic manufacturing firms. *Economic Inquiry*, 52(1), 341-363.
- Cao, W., Duan, X., Uysal, V. B. (2013). Does political uncertainty affect capital structure choices? *Working Paper*.
- Cetorelli, N. and Goldberg, L. S. (2011). Global Banks and International Shock Transmission: Evidence from the Crisis. *IMF Economic Review*, 59(1) 41–76.
- Chakraborty, I. (2010). Capital structure in an emerging stock market: The case of India. *Research in international business and finance*, 24(3), 295-314.
- Chang, X., Chen, Y., and Dasgupta, S. (2019). Macroeconomic conditions, financial constraints, and firms' financing decisions. *Journal of Banking and Finance*, 101, 242-255.
- Chen, H. (2010). Macroeconomic conditions and the puzzles of credit spreads and capital structure. *The Journal of Finance*, 65, 2171–2112.
- Chen, J. (2004). Determinants of capital structure of Chinese-listed companies. *Journal of Business Research*, 57(12), 1341-1351.

- Cheng, C.H.J., and Chiu, C.W. (2018). How important are global geopolitical risks to emerging countries? *International economics*, 156, 305–325.
- Choudhary, M. A., Pasha, F., and Waheed, M (2020). Measuring Economic Policy Uncertainty in Pakistan. *Working paper*.
- Chow, Y. P., Muhammad, J., Bany-Ariffin, A., and Cheng, F. F. (2018). Macroeconomic uncertainty, corporate governance, and corporate capital structure. *International Journal of Managerial Finance*, 14(3), 301–321.
- Colak, G., Gungoraydinoglu, A., and Öztekin, Ö. (2018). Global leverage adjustments, uncertainty, and country institutional strength. *Journal of Financial Intermediation*, 35, 41–56.
- Crotty, J. (2009). Structural causes of the global financial crisis: a critical assessment of the “new financial architecture. *Cambridge Journal of Economics*, 33(4) 563–580.
- De Jong, A., Kabir R., and Nguyen, T.T. (2008). Capital structure around the world: The roles of firm and country-specific determinants. *Journal of Banking and Finance*, 32(9), 1954-1969.
- Demir, E., Ersan, O. (2017). Economic policy uncertainty and cash holdings: evidence from BRIC countries. *Emerging Market Review*, 33, 189–200.
- Dewally, M., and Shao, Y. (2014). Liquidity crisis, relationship lending and corporate finance. *Journal of Banking and Finance*, 39, 223-239.
- Fama, E.F., French, K.R. (2002). Testing trade-off and pecking order predictions about dividends and debt. *Review of Financial Studies*, 15, 1–33.
- Francis, B. B., Hasan, I., Zhu, Y. (2013). Political uncertainty and bank loan contracting. *Working Paper*.
- Francis, B.B., Hasan, I., Zhu, Y. (2014). Political uncertainty and bank loan contracting. *Journal of Empirical Finance*, 29, 281–286.
- Frank, M.Z., Goyal, V.K. (2009). Capital structure decisions: Which factors are reliably important? *Financial Management*, 38, 1–37.
- Gao, P., Qi, Y. (2012). Political uncertainty and public financing costs: Evidence from US municipal bond markets. *Working Paper*.

- Gilchrist, S., Sim, J., Zakrajsek, E. (2014). Uncertainty, financial frictions and investment dynamics (No. w20038). *National Bureau of Economic Research*.
- Graham, J. R. (2003). Taxes and corporate finance: A review. *Review of Financial Studies*, 16(4) pp. 1075–1129.
- Gulen, H., Ion, M. (2016). Policy uncertainty and corporate investment. *Review of Financial Studies*, 29, 523–564.
- Ha, C. Y., Im, H. J., John, K., and Shon, J. (2018). Uncertainty, major investments, and capital structure dynamics. *Peking University HSBC Business School Working Paper*, (2016003).
- Hackbarth, S., Miao, J., Morellec, E. (2006). Capital structure, credit risk, and macroeconomic conditions. *Journal of Financial Economics*, 82, 519–550.
- Halling, M., Yu, J., and Zechner, J. (2016). Leverage dynamics over the business cycle. *Journal of Financial Economics*, 122(1), 21-41.
- Hatzinikolaou D., Katsimbris G.M., Noulas A.G. (2002). Inflation uncertainty and capital structure: Evidence from a pooled sample of the Dow-Jones industrial firms. *International Review of Economics and Finance*, 11(1), 45-55.
- Huy, D. T. N., Dat, P. M., and Anh, P. T. (2020). Buiding an econometric model of selected factors' impact on stock price: A case study. *Journal of Security and Sustainability Issues*, 9., 73-93.
- Huy, D. T. N., Nhan, V. K., Bich, N. T. N., Hong, N. T. P., Chung, N. T., and Huy, P. Q. (2021). Impacts of internal and external macroeconomic factors on firm stock price in an expansion econometric model—A case in Vietnam real estate industry. *In Data Sci for Financial Econometrics*, 189-205.
- Jahanzeb, A., Saif-Ur-Rehman, B. N. H., Karami, M., and Ahmadimousaabad, A. (2013). ‘Trade-Off Theory, Pecking Order Theory and Market Timing Theory: A Comprehensive Review of Capital Structure Theories. *International Journal of Management and Commerce Innovations*, 1(1) 11-18.
- Jensen, M.C. and W.H. Meckling. (1976). Theory of the firm: managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics*, 3, 305–360.

- Julio, B., Yook, Y. (2012). Political uncertainty and corporate investment cycles. *The Journal of Finance*, 67, 45–8.
- Kang, W., Lee, K., Ratti, R. A. (2014). Economic policy uncertainty and firm-level investment. *Journal of Macroeconomics*, 39, 42-53.
- Kayo, E. K., and Kimura, H. (2011). Hierarchical determinants of capital structure. *Journal of banking and finance*, 35(2), 358-371.
- Khan, M. A., Qin, X., and Jebran, K. (2019). Does uncertainty influence the leverage-investment association in Chinese firms? *Research in International Business and Finance*, 50, 134–152.
- Khan, M. A., Qin, X., and Jebran, K. (2020). Uncertainty and leverage nexus: does trade credit matter? *Eurasian Business Review*, 10, 355-389.
- Khawaja, A. I. and Mian, A. (2005). Do lenders favor politically connected firms? Rent provision in an emerging financial market . *Quarterly Journal of Economic*, 120,1371-1411.
- Klossner, S.and Sekkle, R. (2014). International spillovers of policy uncertainty. *Economics Letters*, 124, 508–512.
- Leary, M.T., Roberts, M.R. (2014). Do peer firm affect corporate financial policy? *The Journal of Finance*, 69 (1), 139–178.
- Lee, C. C., Lee, C. C., and Xiao, S. (2021). Policy-related risk and corporate financing behavior: Evidence from China’s listed companies. *Economic Modelling*, 94, 539-547.
- Lee, C.C., Lee, C.C. (2019). Oil price shocks and Chinese banking performance: do country risks matter? *Energy Economics*, 77, 46–53.
- Lee, C.C., Lee, C.C., Lien, D. (2019). Do country risk and financial uncertainty matter for energy commodity futures? *Journal of Futures Markets*, 39 (3), 366–383.
- Lee, C.C., Lee, C.C., Zeng, J.H., Hsu, Y.L. (2017). Peer bank behavior, economic policy uncertainty, and leverage decision of financial institutions. *Journal of Financial Stability*, 30, 79–91.

- Li, X and Qiu, M. (2018). How important is economic policy uncertainty for capital structure decisions? Evidence from US firms. *Available at SSRN*, <http://dx.doi.org/10.2139/ssrn.3102618>.
- Li, X. M., and Qiu, M. (2021). The joint effects of economic policy uncertainty and firm characteristics on capital structure: Evidence from US firms. *Journal of International Money and Finance*, 110, 102279.
- Li, X., and Qiu, M. (2020). Firm-level policy risk in china: The effects on corporate leverage target following behaviour. *Available at SSRN 3604686*.
- Makololo, P., and Seetharam, Y. (2020). The effect of economic policy uncertainty and herding on leverage: An examination of the BRICS countries. *Cogent Economics and Finance*, 8(1), 1821482.
- Miller, M. H. (1977). Debt and Taxes. *The Journal of Finance*, 32(2). 261–275.
- Modigliani, F., and Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American Economic Review*, 48(3), 261–297.
- Myers, S. C. (1984). The capital structure puzzle. *The Journal of Finance*, 39(3), 574–592.
- Myers, S. C. and Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2) pp. 187–221.
- Pan, W.-F., Wang, X., and Yang, S. (2019). Debt maturity, leverage, and political uncertainty. *The North American Journal of Economics and Finance*, 50, 100981.
- Pastor, L., and Veronesi, P. (2012). Uncertainty about government policy and stock prices. *The journal of Finance*, 67(4), 1219-1264.
- Pástor, L., Veronesi, P. (2013). Political uncertainty and risk premia. *Journal Financial Economics*, 110, 520–545.
- Pindado, J., Requejo, I., Rivera, J.C. (2017). Economic forecast and corporate leverage choices: the role of the institutional environment. *International Review Economics and Finance*, 51, 121–144.

- Qiu, M., and La, B. (2010). Firm characteristics as determinants of capital structures in Australia. *International journal of the Economics of Business*, 17(3), 277-287.
- Rodrik, D. (1991). Policy uncertainty and private investment in developing countries. *Journal of Development Economics*, 36(2), 229-242.
- Schwarz, L. A. D., and Dalmácio, F. Z. (2021). The relationship between economic policy uncertainty and corporate leverage: Evidence from Brazil. *Finance Research Letters*, 40, 101676.
- Shleifer, A., and Vishny, R. W. (1992). Liquidation values and debt capacity: A market equilibrium approach. *The journal of finance*, 47(4), 1343-1366.
- Umaro Aldata, M. M., and Wijaya, C. (2020). The influence of uncertainties on leverage and investment decisions of non-financial firms in Indonesia. *International Journal of Management*, 11(5).
- Wang, Y., Chen, C. R., and Huang, Y. S. (2014). Economic policy uncertainty and corporate investment: Evidence from China. *Pacific-Basin Finance Journal*, 26, 227-243.
- Welch, I. (2004). Capital structure and stock returns. *Journal of Political Economy*, 112(1), 106-132.
- Yarba, I., and Güner, Z. N. (2020). Uncertainty, macroprudential policies and corporate leverage: Firm-level evidence. *Central Bank Review*, 20(2), 33-42.
- Zhang, G., Han, J., Pan, Z. and Huang, H. (2015). Economic policy uncertainty and capital structure choice: Evidence from China. *Economic Systems*, 39 (3), 439-457.