

SECTOR ANALYSIS ON DETERMINANTS OF CAPITAL STRUCTURE AND
HUMAN CAPITAL AMONG NON-FINANCIAL LISTED FIRMS IN
PAKISTAN

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A thesis submitted in fulfilment of the
requirements for the award of the degree of
Doctor of Philosophy (Management)

Faculty of Management
Universiti Teknologi Malaysia

APRIL 2015

DEDICATION

This thesis work is dedicated to my parents Dr. Iqbal Ahmed and Mrs. Iqbal, who have always loved me unconditionally and whose good examples have taught me to work hard for the things that I aspire to achieve. I would also like to dedicate this work to my siblings Haris, Juveria and Bilal who have always loved and encouraged me. Lastly, I'd also like to dedicate my work to my love, Aisha, who has been a constant source of support and encouragement during this challenging time.

ACKNOWLEDGEMENTS

All praise to Allah, the lord of the worlds, and His Prophet Muhammad (peace be upon him), his family and his companions. First of all, I wish to express my gratitude and deep appreciation to Almighty Allah, who made this study possible and successful.

This study would not be accomplished unless the honest espousal that was extended from several sources for which I would like to express my sincere thankfulness and gratitude. Yet, there were significant contributors for my attained success and I cannot forget their input, especially my research supervisors, Dr. Norkhairul Hafiz Bajuri and Dr. Saif-ur-Rehman Khan who did not leave any stone unturned to guide me during my research journey.

I shall also acknowledge the extended assistance from the administrations of Faculty of Management (FM) and School of Graduate Studies (SPS) who supported me all through my research experience and simplified the challenges I faced.

For all whom I did not mention but I shall not neglect their significant contribution, thanks for everything.

ABSTRACT

Capital structure provides a way of controlling and directing financial mechanism that helps a firm in achieving its desired objectives for maximizing stakeholders' wealth. Past studies on aligning the reasonable or optimal capital structure with firm's operating, investing and financial requirements are still rare in developing countries and in Pakistan particularly. The current study provides a dynamic framework to investigate the sensitivity of capital structure and how various factors influence the nature of debt and equity financing. The study investigates the relationship of several independent firm-level variables such as, size, tangibility, profitability, growth, non-debt tax shield, dividend payout, firm age, business risk, uniqueness and liquidity with capital structure of firm. Furthermore, this study explores the different dimensions where human capital relation was also examined with all the three measures of dependent variable, i.e., short-term debt, long-term debt and total debt ratios. Analysis was conducted by using the ten years (2003-2012) data of 176 non-financial companies from eight different sectors (i.e., automobile and parts, chemicals, construction and materials, electricity, food processors, oil and gas, personal goods and household goods) listed on Karachi Stock Exchange (KSE). Three different methodologies were employed, i.e., pooled data estimation, panel data estimation and dynamic panel data estimation. Analysis showed that the different sectors behaved differently towards capital structure. However, overall analysis of 176 companies showed that the firm size, profitability, dividend payout and liquidity remained significantly correlated to capital structure. While applying Generalized Method of Moments (GMM), results of long-term debt show that all the variables remained significant except uniqueness of firm. Moreover, firm size also played significant role as a moderator between human capital and capital structure. The findings of this study are discussed in terms of theoretical, practical and conceptual implications for both scholars and policy makers to better understand decisions related to capital structure with a view for future researchers.

ABSTRAK

Struktur modal adalah satu cara mengawal dan mengarah mekanisma kewangan untuk membantu syarikat dalam mencapai objektif yang dikehendaki dalam memaksimumkan kekayaan pemegang kepentingan. Kajian lalu dalam menjajarkan struktur modal yang wajar atau optima dengan operasi, pelaburan, dan kewangan syarikat masih kurang di negara-negara membangun terutamanya Pakistan. Kajian ini menyediakan kerangka yang dinamik untuk menyiasat sensitiviti struktur modal dan bagaimana pelbagai faktor mempengaruhi sifat pembiayaan hutang dan ekuiti. Kajian ini juga menyiasat hubungan beberapa pembolehubah tidak bersandar tahap syarikat, seperti saiz, ketaraan, kebolehtungan, pertumbuhan, perisai cukai bukan-hutang, pembayaran dividen, umur syarikat, risiko perniagaan, keunikan, dan kecairan, dengan struktur modal syarikat. Seterusnya, kajian ini meneroka dimensi berlainan di mana hubungan modal insan juga diperiksa dengan semua tiga pengukur pembolehubah bersandar, contohnya hutang jangka pendek, hutang jangka panjang, dan nisbah jumlah hutang. Analisis dijalankan menggunakan data sepuluh tahun (2003-2012) daripada 176 syarikat bukan kewangan yang terdiri daripada laman sektor berlainan (contohnya, otomobil dan komponen, kimia, pembinaan dan bahan, elektrik, pemprosesan makanan, minyak dan gas, barangan peribadi, dan barangan isi rumah) yang tersenarai di *Karachi Stock Exchange* (KSE). Tiga metodologi telah digunakan dalam kajian ini iaitu *pooled data estimation*, *panel data estimation* dan *dynamic panel data estimation*. Analisis menunjukkan sektor berlainan memberi kesan berbeza terhadap struktur modal. Walau bagaimanapun, analisis keseluruhan 176 syarikat menunjukkan bahawa saiz syarikat, kebolehtungan, pembayaran dividen, dan kecairan tunai masih berkorelasi secara signifikan terhadap struktur modal. Apabila dikenakan *Generalized Method of Moment* (GMM), keputusan hutang jangka panjang menunjukkan bahawa kesemua pembolehubah masih signifikan kecuali keunikan syarikat. Disamping itu, saiz syarikat juga memainkan peranan yang signifikan sebagai moderator antara modal insan dan struktur modal. Dapatan kajian ini dibincangkan secara teoretikal, praktikal, dan implikasi konseptual supaya pengkaji dan pembuat polisi lebih memahami keputusan berkaitan dengan struktur modal dengan memberi ruang kepada pengkaji akan datang.

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LIST OF ABBREVIATIONS

MM	-	Modigliani and Miller
TOT	-	Trade-off Theory
POT	-	Pecking Order Theory
STD	-	Short-term Debt
LTD	-	Long-term Debt
TD	-	Total Debt
SIZE	-	Firm Size
TANG	-	Tangibility
PROF	-	Profitability
GROW	-	Growth
NDTS	-	Non-debt Tax Shield
DPO	-	Dividend Payout
AGE	-	Firm Age
RISK	-	Business Risk
LIQ	-	Liquidity
UNIQ	-	Uniqueness
HC	-	Human Capital
OLS	-	Ordinary Least Square
GMM	-	Generalized Method of Moments
PES	-	Pakistan Economic Survey

CHAPTER 1

INTRODUCTION

1.1 General Overview

Today's competitive environment has made the managers cautious and more aware about how to finance their business activities and manage capital structure. Capital structure has widely been discussed during the last five decades in the field of corporate finance after the originative work of Modigliani and Miller (1958). After the inclusion of MM irrelevance theorem, pecking order and trade-off theories came into being as the basic theories in the area of capital structure that firms have always been following. Literature pertaining to determinants of capital structure has widely been categorized in these two theories (Atiyet, 2012). Corporate finance has been explained by each theory differently. This development encourages the managers to focus on how to maximize the firm's overall value. Capital structure is usually being managed with the help of two major theories, i.e. trade-off theory and pecking order theory. Trade-off theory actually supports the leverage to construct capital structure by assuming leverage-benefits. Through balancing the gains from interest payments and costs of issuing debt, the most advantageous level of leverage can be achieved. Financially, debt is considered beneficial because of the debt-tax-shields that help to minimize expected tax bills and maximize the after-tax cash flows (Modigliani and Miller, 1958). Trade-off theory hence predicts the cost and benefit analysis of debt financing to achieve optimal capital structure (Graham, 2000). On the contrary, the other prominent theory related to capital structure is pecking order theory that focuses to finance firm operations with its internally generated sources first, i.e.

retained earnings rather than issuing debt and equity (external financing). Pecking order theory (Myers, 1984; Myers and Majluf, 1984) argues to minimize the firm's insiders-outsiders issues related to information asymmetry by following a particular financing hierarchy. The theory gives a clear idea that the managers first prioritize the retained earnings to finance their activities and if they need more funds, they choose to issue debt; lastly, when issuing more debt makes no sense, equity is issued. Pecking order theory, on one side, supports the assumption that high profitable firms would most likely finance their activities with internal funds and would tend to lower the level of debt ratio. Whereas trade-off theory also depicts the positive relation between leverage and profitability by reporting that the high profitable firms prioritize their investments with external finance to shield the income from taxes with the help of leverage. Almost a decade ago, a new theory has been developed called market timing theory (Baker and Wurgler, 2002). This theory suggests corporations favour external equity, and favour debt otherwise, once the charge of equity is low down. There is a perception among business directors that their dodgy securities are mispriced by marketplace.

Since MM Theorem (1958) was presented, various studies have been presented by researchers to explain the variations in leverage ratios across firms among different countries. As explained by DeAngelo and Masulis (1980), trade-off theory explicated the relevance of debt with existence of bankruptcy costs and taxes. Generally, it is explained by this theory that the combination of tax advantages of debt and leverage costs creates an optimum capital structure below 100% debt financing, as the tax advantage of debt is traded against the likelihood of incurring bankruptcy costs (Wijst and Thurik, 1993).

Research work on capital structure determinants in the beginning was being mainly contributed by United States. However, studies based on merely one country may not represent the whole lot of developing or developed countries and their economic or traditional environments (Antoniou *et al.*, 2002). During 1980s, this research work widened to Japan and Europe (Nagano, 2003). To extend this research, Rajan and Zingales (1995) further broadened the scope and presented the results on

G-7 countries, which remained similar to those factors that influenced leverage of U.S firms.

No any particular theory has been successful to provide empirical evidence to measure leverage ratios in time-series and cross-sectional patterns (Parson and Titman, 2009; Graham and Leary, 2011). Nevertheless, firm level factors have been identified by several theories, which reliably explain the changes in financial debt ratios (Lemmon *et al.*, 2008; Frank and Goyal, 2009a). Capital structure theories are determined with the help of proxies and observable leverage factors that drive these theories, for instance, information asymmetry and financial distress. However, such relationships and expected signs are not yet clear, therefore to examine such factors that are relevant to corporate leverage is very important (Drobetz *et al.*, 2013).

1.2 Background of the Study

By going through the literature on traditional theories of capital structure, it has been noticed that every financing decision is a heedful move around the leverage ratio. Nevertheless, actual and optimal leverage ratios might differ due to changes in information asymmetry, growth opportunities, level of investment, past stock returns, market conditions and macroeconomic conditions. On the other hand, pecking order theory predicts that information asymmetry costs overcome the trade-off costs. Those firms seeking investment opportunities to finance their projects borrow from financial institutions and face an adverse selection problem. If managers know about the opportunities for firm to invest, then the securities issued by the firm that are sensitive to market will be penalized by the market (Myers, 1984). Hence, hierarchal pecking order choices are made: internal funds are preferred over external funds, and then debt is preferred over equity (Frank and Goyal, 2005; Lemmon and Zender, 2008; Mazen, 2012).

This debate about how a firm opts its capital structure, started around five decades ago when Modigliani and Miller (1958) presented their groundbreaking

study (Myers, 2001). Their study diverted the researchers' attention towards capital structure. In modern times, theory of business finance begins with the irrelevance proposition of capital structure by Modigliani and Miller (1958). Before their study, there was no any generally accepted and published theory regarding capital structure. According to them, "the market value of any firm is independent of its capital structure" and that a firm has a special set of expected cash flows. To finance its assets, when a firm selects a certain proportion of equity and debt, it divides up cash flows among investors. Both the firms and investors are supposed to have equal opportunities to access financial markets that allow homemade leverage. Consequently, firm's leverage has no impact on firm's market value. Their theory shaped the early development of capital structure.

For a long time, practitioners and scholars have given much importance to the subjects related to the capital structure of the companies. The questionable issue here is whether the capital structure of the companies is managed knowingly (trade-off theory) or random processes are involved to pursue optimal capital structure determined by investment options, dividend policy, historical profitability and the conditions related to capital market (pecking order and market timing theories). According to Gaud *et al.* (2005) and Graham *et al.* (1998), several authors argue that there is no consensus among the capital structure theories which could provide the satisfactory description to take appropriate financing decisions. A few studies (for example, Mayer and Sussman, 2004; Tucker and Stoja, 2004; Farhat *et al.*, 2006) conclude that the companies in long run don't actually pursue the target leverage ratio, but seems like pecking order behaviour dominates on capital structure decisions in short-run. It is observed that the gap between target and observed capital structure is gradually reduced by the companies once they are driven away from their target level. When the adjustment speed is higher, the partial adjustment behaviour leads to trade-off theory. In other case, those determinants remain dominant which are related to pecking order theory. Again, contradictory results can be seen in studies, this might be happening because different authors use different leverage specifications in different ways. In recent studies, for example, results by Flannery *et al.* (2004) depict the adjustment speed of one third per year, whereas the results by

Farhat *et al.* (2006) and Huang and Ritter (2009) show that the firms keep on moving slowly towards their target leverage. However, the puzzle still remains unsolved.

During recent decades, the finance has gained much importance in accordance with economic growth, where the researchers have been trying to determine the strong financial markets and enhance the economic growth (for instance, Amable and Chatelain, 2001; Durham, 2002; Wurgler, 2000; Rousseau and Xiao, 2008). Efficient financial markets hence can mobilize foreign and domestic financial resources and can also allocate these resources to the most profitable and productive investments. By enforcing market discipline economic growth can also be contributed by facilitating transactions, pooling risks and enhancing corporate governance (ESCWA, 2004). Usually, two different sources of financing are chosen by firms to finance their projects from financial markets: by debt issuance (bond or credit markets) or stock issuance (equity market). The term “capital structure” in this regard, pertains to the way that how corporations decide the combination of debt and equity to finance their projects. Although, these two sources (debt and equity) complement each other when it comes to finance investments projects, but at the same time, differ in nature. It’s important to look for the best alternate to finance each investment. A firm would seem financially risky if it has got too much debt. By getting too much debt, firm can be endangered to downfalls in business and changes in interest rates. On the other hand, if a firm gets too much equity, this would dilute the ownership interest and external control will dominate the firm. This generally shows that business assets are not being utilized properly to run the business effectively. This discourages the investors, because in this way less profit would be distributed among them. This is why one cannot come up with a perfect recipe with respect to best debt-equity choice. Financial economic literature is full of so many theorems describing attainment of optimal capital structure. Each theorem describes different approaches and methods of corporate financing under certain propositions, assumptions and conditions (Eldomiaty, 2008). That is why literature on capital structure theories and determinants does not contain any single explanation or finding.

During recent years, in corporate finance, optimal capital structure has been considered as a fundamental problem, due to which researchers have given it much importance and attention. Managers related to the field of corporate finance attempt to determine the best mix of the money that how much should be from banks or lenders without jeopardising the business or to find the best capital structure choice in terms of paying their shareholders risk/reward. It has also been noticed that many researchers are trying to figure out the determinants that affect the optimal capital structure of a firm. This study, hence, tries to provide the results which will help the top management of the firms to make financial decision-making while considering the importance of these determinants.

There is no doubt that Modigliani and Miller theorems (1958; 1961; 1963) laid the foundation stone to begin the research on capital structure theories, optimal capital structure and financial decision making. Generally, it is considered to be purely theoretical assumption established on another assumption that capital structure is not influenced by important elements.

The core issue discussed and investigated inside the literature of business finance is capital structure (Kouki and Said, 2012). When Modigliani and Miller (1958) offered their article “The Cost of Capital, Corporation Finance and the Theory of Investment”, at that point of time the new theory of capital structure set off. According to their demonstration, the preference among debt financing, equity financing and the firm’s value is incompatible to its structure of capital. They also presumed resistance less and ideal capital markets (Myers, 2001). Moreover, the suppositions of the best capital marketplace and development of two vital propositions concerning decisions of business finance regarding the risk and worth of the firms’ equity and debt securities (Ogden *et al.*, 2003) is also affirmed by Modigliani and Miller. Ever since the Modigliani and Miller’s article, investigators have talked about how fresh investment be supposed to financed, how quantity of debt of firm must be recognized, in addition to if firms have the best possible capital structure. An affluent theoretical structure has been completed by this to materialize and shape the preference of structure of capital of firm by means of utilizing diverse theoretical structures. These theories provide matching and probable details to the

firm's preference of capital structure. The theories depend on conventional aspects for instance returns of tax shield, whereas asymmetric facts are integrated by other theories involving the administration and the owners of the company, and it is also recommended by added theories that for indicating rationales to exteriors the capital structure can be utilized (Bancel and Mittoo, 2004).

On the issue related to human capital's impact on capital structure, a few studies have been conducted, and that even relate to developed countries only. Akyol *et al.* (2013) in this regard, examined the relationship between leverage and employee wages of unlisted firms of Netherlands. Insight into the commonality of their outcomes is provided by this test, for instance, Netherlands is a nation with an extra inclusive system of social security, which out-turns in on average lesser bankruptcy costs for workers in the Netherlands. Another pioneer study from United States in this regard, conducted by Chemmanur *et al.* (2013), showed that the employee pay has significant and positive impact on leverage.

These both studies tried to investigate the impact of leverage on human capital. However, this study tried to explore the reverse relationship, i.e. impact of human on leverage. Human capital is considered the most important asset for any organization. There exists lack of empirical studies which may help the management consider this variable while making financial decisions. Hence, this study tried to explore the role of human capital in corporate financial decision-making in non-financial firms of Pakistan. The issue is further discussed in problem statement. Furthermore, previous studies show that there is somewhat relationship between firm size and human capital. Therefore, this study also used firm size as a moderator between the human capital and leverage to investigate whether this strengthens or weakens the relationship between the dependent and independent variables.

1.3 Problem Statement

This study chooses a developing country from Asian markets, Pakistan. During 1960s Pakistan was considered to be a successful economic model around the globe, but during the past few decades the country has been victim of fast growing population, steady foreign remittances, slow growth rate and political disruption. Pakistan was affected by global financial slow-down during 2008-09, and the country had to seek financial assistance from International Monetary Fund (IMF). Although, many other Asian developing countries, i.e. India, Malaysia, China, etc managed to tackle financial conditions without opting any financial assistance from IMF.

In modern corporate finance, the problem of corporate capital structure is still controversial (Lim, 2012). Since the study of Modigliani and Miller (1958), a superfluity of research has been executed to identify the determinants of capital structure. Corporate investments have important effects on both financing decisions (Lang *et al.*, 1996) and adjustment toward optimal capital structure (Clark *et al.*, 2009; Flannery and Hankins, 2007; Lemmon *et al.*, 2008) because capital expenditures tend to be mainly funded by internally generated cash flow (Myers, 1984). Myers (1984) explains that to retire the debt surplus may be used or to retire equity investment can be made on marketable securities. Hence, this concept of raising debt is coherent with the theory of free cash flow (Jensen, 1986) not with the pecking order theory. In addition, firms may be less/more sensitive to financial deficit than financial surplus, making the impulse of expanding debt for financing higher (lower) than that of retiring debt for soaking up financial surplus (free cash flow) (Zurigat, 2009).

Recent international studies of capital structure show that the financial orientation of the economy in which firms operate has a significant impact on the sources of financing available to them and hence their target adjustment behavior (Antoniou *et al.*, 2008; Mahajan and Tartaroglu, 2008; De Jong *et al.*, 2008). Antoniou *et al.* (2008) further show that firms' adjustments toward target leverage are also dependent on the macroeconomic system. For example, more creditor-

friendly bankruptcy laws, higher levels of ownership concentration, and closer relationships between firms and their banks may lead to firms' relative preference for debt financing among firms in bank-oriented economies. However, this strand of research remains silent on how firms' adjustment speeds may be asymmetrically determined by costs of deviations from target leverage and costs of adjustment toward such targets.

Al-Najjar (2011) determines that the recent development in explanations and theories has provoked empirical research in this field. Like other authors, Al-Najjar (2011) also describes the same that no consensus has been achieved yet. He further adds that most of the studies have been conducted in developed countries, i.e. UK and U.S. and not many studies have used the data from developing countries to test the capital structure theories (Ba-Abbad and Ahmad-Zaluki, 2012). Likewise, Chang *et al.* (2014) also mention in their study that vast literature on capital structure relates to United States. Hence, the empirical evidence on capital structure has limited evidence from developing countries and that the most of the studies are restricted to developed countries only.

Although, number of studies have been conducted in developed countries on this issue, but the studies among developing countries are still scarce. Very few studies (e.g. Booth *et al.*, 2001; Bessler *et al.*, 2011) have included Pakistan along with other developing countries to see the impact of factors that affect capital structure. Until now, there is lack of concrete evidences that could answer these questions:

- (i) What is the debt ratio adopted by non-financial companies in Pakistan?
- (ii) What are the determinants which affect leverage choices of these firms?
- (iii) Are they (factors) same which have been pointed out in literature by studies from developed countries or from other developing countries?

There are still controversial results shown by the researchers. These differences can be seen in the results from one study to another study. Below is the example of few classical researchers depicting disagreements:

- (i) **Results from U.S.** (Titman and Wessels, 1988): Leverage is not affected by tangibility, financial distress (volatility), non-debt tax shield and growth. However, impact of firm size is positive on leverage.
- (ii) **Results from developing countries** (Haris and Raviv, 1991): Tangibility, firm size, non-debt tax shield and growth increase level of leverage, and profitability and volatility (financial distress) decrease leverage.
- (iii) **Results from ten different developing countries** (Booth *et al.*, 2001): Volatility (financial distress) and tangibility are positively correlated to leverage in 4 out of 10 countries.

It can be noticed that such classical studies in the field of corporate finance also differ in terms of findings when it comes to the optimal capital structure or its determinants. In accordance with the results, it is still questionable that which model best defines the determinants of capital structure. On the basis of such contradictory findings, this study employed several firm-level determinants including human capital as independent variables to address this issue.

Nonetheless, the concerns of most capital structure studies are in developed countries (Bevan and Danbolt (2002) (the UK), Antoniou *et al.* (2002) (UK, Germany, and France), Hall *et al.* (2004) (European SMEs), Akhtar (2005) (Australia), Akhtar and Oliver (2009) (Japan), Muradoğlu and Sivaprasad (2012) (UK), Kouki and Said (2012) (France), Hernádi and Ormos (2012) (Europe)). Previous research on the capital structure of Pakistani enterprises is limited. Pakistan is absent in international analyses of capital structure in developing markets (e.g. Deesomsak *et al.*, 2004; Harvey *et al.*, 2004) and only a few country specific peer-reviewed studies are discernible (Booth *et al.*, 2001; Bessler *et al.*, 2011).

There are few studies that offer evidence from developing countries such as, Wiwattanakantang (1999) (Thailand), Booth *et al.* (2001) (Brazil, Mexico, India, South Korea, Jordan, Malaysia, Pakistan, Thailand, Turkey, and Zimbabwe), Pandey (2001) (Malaysia), Chen (2004) (China), Omet and Nobanee (2001) (Jordan), Al-Sakran (2001) (Saudi Arabia), and Buferna *et al.* (2005) (Libya), Newman *et al.* (2012) (China), Chakraborty (2010) (India), Al-Najjar (2011) (Jordan), Mouamer (2011) (Palestine), Dawood *et al.*, (2011) (Egypt). In addition, some capital structure studies have used cross-country comparisons between developed and developing countries such as Deesomsak *et al.* (2004) (Thailand, Malaysia, Singapore, and Australia), Supanvanij (2006) (Japan, Hong Kong, Singapore, Korea, Thailand, Malaysia, Taiwan, and Philippines), and Kim and Berger (2008) (the US and Korea).

Among the developing countries, especially in Pakistan, there is still lack of research on capital structure's puzzling issue. Quite a few studies are available on this issue and that even with limited scope. Hence, the problems still exist for the managers while dealing with capital structure and financial decision-making. Umar *et al.* (2012) tried to demonstrate that the capital structure is still controversial and puzzling, particularly in emerging markets, such as Pakistan. Further studies should examine the determinants of capital structure of the Pakistani companies, such as growth and size and business risk, etc. Such facts motivate to conduct a comprehensive study on capital structure with a broad scope and large data set.

Research conducted by Ahmad *et al.* (2011) used Pakistani non-financial firm's data, so the results of this study could not be generalized according to sectors. They determined that future studies can be conducted by using the data from other sectors of Pakistan economy or other developing country non-financial data. Their study used five previously studied variables (profitability, size, growth, tangibility of assets, non-debt tax shield), and added three new variables (tax, liquidity and payout), which were not used previously in Pakistani context. According to Umar *et al.* (2012), more studies should examine the determinants of capital structure of the Pakistani companies, such as growth and size and business risk.

In addition, studies in Pakistan in this area are not only rare but controversial as well. Mahmud and Qayyum (2003) focused on factors that affect firm's capital structure decisions in Malaysia, Japan and Pakistan. He found that high leverage ratio was shown by Japan and Pakistan because of under developed market of Pakistan and developed market of Japan which provokes banks to choose bank loans rather than equity. Qureshi and Azid (2006) identified that the public sector preferred financing through debts due to low corporate governance, favourable terms and conditions of commercial banks and lesser accountability than private sector. It has been examined by Shah and Khan (2007) that the leverage ratio for textile industry was higher and due to family controlled businesses average profitability of textile industry has been found negative, as family controlled businesses state low profitability. By examining the cement sector of Pakistan, Hijazi and Tariq (2006) found that the results were highly significant except the size of the firm and he has rejected static trade-off theory. Kanwar (2007) examined the sugar industry of Pakistan and he found that asset tangibility, return on assets, size and market to book ratio are significant except tax rate. Chemical industry of Pakistan was examined by Rafiq *et al.* (2008) and noticed that chemical sectors prefers more equity financing over debt financing.

Furthermore, there is a lack of comprehensive studies on leverage on sectors in Pakistan. There are quite a few studies available and that even with limited data, limited scope and limited findings, which do not resolve the problems that are being faced by the finance managers to deal with leverage. This study conducts analysis on several non-financial sectors. Not only this, the study also sheds light (in Chapter 5) on the problems that currently or during past few years have been faced by every sector. This will assist the managers, firm owners and investors to make financial decisions in accordance with the findings available on particular sector.

In addition, another important dimension of this study is to look into human capital's interaction with capital structure which has rarely been investigated (Chemmanur *et al.*, 2013; Akyol and Verwijmeren, 2013). Chemmanur *et al.* (2013) claim that they are the first to examine whether the human capital cost is an important determinant of capital structure as described in literature. This has not been

investigated in any developing country yet; hence, this study further looks into the insights by using data from a developing country, i.e. Pakistan, whose results can further be generalized in developing economies. In addition, Akyol and Verwijmeren (2013) tried to investigate the impact of leverage on human capital costs whereas this study tried to investigate the reverse impact, i.e. impact of human capital on leverage to have a closer and better insight on the relation.

Moreover, researchers generally accept this fact that human capital is considered the most important part of any organization and different sized companies pay different wages to their employees (Ahn, 2006; Arbache, 2001; Fox, 2009). Akyol and Verwijmeren (2013) also concluded that the firms with higher level of leverage tend to pay more to their employees.

It can be said that there exists a relationship between size and human capital. This study contributes more to the limited literature and findings available, by investigating the moderating role of firm size between human capital and capital structure to examine whether the firm size plays any role between human capital and leverage. There is a need to understand what happens with the leverage when firm size significantly plays role. This investigation would help the managers and investors to further understand the complex relationship between firm size, human capital and leverage.

1.4 Research Questions

The present study is aimed to examine the impact of determinants of capital structure among non-financial firms listed on Karachi Stock Exchange and to examine the impact of human capital on capital structure. Following research questions were focused in this study:

1. What is the relationship between firm- and sector-level variables, human capital and leverage?

2. To what extent determinants of capital structure influence significantly to firm leverage across the non-financial firms listed on Karachi Stock Exchange?
3. To what extent the determinants of capital structure impact the leverage among different non-financial sectors?
4. To what extent human capital influences the capital structure of the firms across different non-financial sectors?
5. Does firm size play moderating role on the relationship between human capital and capital structure?

1.5 Research Objectives

Present study is an endeavour to investigate empirically the following research objectives among firms listed on Karachi Stock Exchange.

1. To determine the relationship between firm- and sector-level variables, leverage and human capital.
2. To examine empirically the intensity of capital structure determinants influence significantly to the leverage of the firms among the non-financial firms listed on Karachi Stock Exchange.
3. To what extent capital structure determinants predict significantly the firm leverage across different non-financial sectors.
4. To investigate the impact of human capital on the capital structure across different non-financial sectors.
5. To determine the moderating role of firm size on the relationship between human capital and capital structure.

1.6 Significance of the Study

This proposed study helps to investigate and understand the mechanism of capital structure. This study fills the theoretical gap by investigating the relation between capital structure and human capital, which has not been investigated in any developing country yet. The study further enriches the empirical evidence on the relationship of determinants of capital structure and leverage, which has been seen controversial in literature.

Most of the studies have been conducted in developed markets. Hence, this study provides an authentic knowledge to the financial managers related to developing markets, importantly, Pakistan. As Umar *et al.* (2012) explain that more research is required in this field to better understand the complexity of capital structure. This study tried to fill up this gap left in literature by testing and extending the existing models (i.e. addition of human capital in existing model) to monitor leverage ratio.

No consensus has been made regarding the financial decision making of firms, with respect to leverage. This study also provides the knowledge to understand about how firms decide their leverage policies and which theory of capital structure is significant in terms of Pakistan. Determinants also play vital role here, since the complexity of developing markets differ from those of developed ones. Hence this study also helps to understand the complexity of determinants in terms of financial decision making by firms as there is lack of consensus again in literature. This study tried to fill the gap in empirical evidence in terms of developing markets, as most of the studies focus on merely developed markets.

A few studies (world-wide) have been conducted on developing countries which included Pakistan as well (See e.g. Booth *et al.*, 2001; Bessler *et al.*, 2011). This study enriches the literature on those factors affecting capital structure. This study will probably be helpful for top managements of firms conducting their business in Pakistan to take financial decisions more efficiently and to understand the significance of leverage and human capital.

1.7 Justification for Choosing Pakistan

Like any other country in the world, Pakistan has also distinct features, i.e. language, religion, rules, regulations, laws, ethnicity, culture, GDP, growth rate, inflations rate, literacy rate and geographic location etc. These features guide production and restrict the individuals' consumption behaviour. This study was conducted in Pakistan, which is a developing country with different institutions setting that affects the firms' financing decisions. Institutional setting in Pakistan consists of fixed income/bond market, tax laws and economic conditions.

According to Klynveld Peat Marwick Goerdeler (KPMG) international survey (2008), corporate tax rate in Pakistan has remained 35% from 2002 onward. Still, the corporate tax rate for public, private and banking companies is still 35% in 2012-13. Income tax for small companies is 20%. In Pakistan, a small company means a company having less than 250 workers and less than PKR 250 million turnover. Corporate tax rate remained 35% in Pakistan in 2013 as compare to 33.99%, 25%, 27.5%, 25% and 20% in India, Malaysia, Bangladesh, China and Afghanistan respectively (KPMG, 2013). This shows that many countries have decreased their corporate tax rates to attract foreign direct investment. This study employed a variable, i.e. non-debt tax shield, which will act like a proxy to see this tax-related impact. The findings will provide much understanding of leverage in a developing country like Pakistan, which may also be generalized in other developing countries as well.

1.8 Scope of the Study

This study was conducted regarding the investigation of determinants of capital structure that are related to 'leverage' chosen by the listed non-financial Pakistani firms. The proposed study was to conduct research on capital structure determinants and the impact of human capital on capital structure. Secondary data

was employed to conduct research on non-financial firms listed on Karachi Stock Exchange (KSE).

This study was conducted on a wider and broader scope. Several variables have been investigated over capital structure. Not only this, the study also employed a unique variable in the field of corporate finance, i.e. human capital. Their impacts have not only been investigated on overall data, but also among different non-financial sectors. The companies for which the data was gathered belong to eight different sectors namely, automobile and parts, chemicals, constructions & materials, electricity, food processors, oil & gas, textile, and household goods. The classification is provided in Table 4.1.

1.9 Limitations of the Study

Below are few limitations of the study:

1. Results specially relate to Pakistani market, but they do illuminate generality of capital structure rival models. Many structural characteristics of Pakistan's capital market are present in other developing countries as well. Thus, the findings from this study may assist to furnish the basis for comparative studies both in the region and in other developing markets.
2. Second limitation might be the usage of proxies in this study. Even though, these proxies were defended theoretically and empirically, but still, proxies might not accurately represent theoretical propositions. In addition, it is difficult to look for those proxies that are not related to one another. However, this problem of proxy variable is common in all empirical studies regarding the field of capital structure.

1.10 Operational Definitions of Variables

Operational definitions of variables that are considered in this study are as follows:

1.10.1 Capital Structure

The term capital structure refers as to how an organization finances its assets via debt and equity (Al-Farisi and Hendrawan, 2012). Moreover, it can be explained as an organization's financial framework that is the mixture of equity and debt. Growth and performance of an organization depend upon the selection of the capital structure. Hence, it is important for an organization to choose optimal or near to optimal capital structure for better performance (Arbabiyan and Safari, 2009).

1.10.2 Firm Size

The bigger the firm, the more it has capability to acquire debt financing (Fama and French, 2002). This study used natural logarithm of total sales to measure the firm size (Hernadi and Ormos, 2012).

1.10.3 Tangibility

According to Harris and Raviv (1991), a firm's tangible assets have greater value of liquidation. More tangible a firm acquires, the more it can acquire debt. This study measured tangibility of a firm by fixed assets over total assets (Chen *et al.*, 2013).

1.10.4 Profitability

Profitability of a firm can also be considered as an important determinant of capital structure (Chen and Chen, 2011b). This study measured profitability of a firm as earnings before interest and tax over total assets (Nadaraja *et al.*, 2011).

1.10.5 Growth

Companies with greater growth opportunities look forward to external sources of financing (Hall *et al.*, 2004). This study measured growth of a firm by applying the geometric average of five-year sales growth to total asset growth (Delcoure, 2007).

1.10.6 Non-Debt Tax Shield

According to DeAngelo and Masulis (1980), non-debt tax shield (NDTS) is an alternative for the debt financing tax benefit similar to investment tax credits and depreciation tax deduction. This study measured NDTS by total depreciation expense over total assets (Dang *et al.*, 2012).

1.10.7 Dividend

It has been suggested by Chen and Chen (2011b) that dividends are signal of financial health to outsiders. This study measured dividend payout ratio by dividend per share over earning per share (Al-Najjar, 2011).

1.10.8 Firm Age

Age of a firm may also be linked to capital structure as a determinant. Here, age of a firm means the date of incorporation (Akhtar and Oliver, 2009).

1.10.9 Business Risk

Business risk or probability of bankruptcy may be considered as an important determinant of capital structure. This study measured business risk by taking standard deviation of return on assets (Hernadi and Ormos, 2012).

1.10.10 Uniqueness

Firms which manufacture specialized or unique products suffer from more costs in the event that they liquidate (Titman and Wessels, 1988). Because their suppliers and workers have certain specialized skills related to their jobs that might be hard for them to cash out in any other operation (Hsu and Hsu, 2011). This study measured uniqueness as selling expense over sales (Shahjahanpour *et al.*, 2010).

1.10.11 Liquidity

Liquid assets increase firms' ability to obtain debt finances. Liquid assets can be sold without significant loss of their value, making better collateral for the lender. Therefore, debt is used as lenders face lower costs in financing such assets (Al-Najjar, 2011). This study measured liquidity by current assets over current liability (Mouamer, 2011).

1.10.12 Human Capital

Human capital is considered as an important element for any organization. Every organization requires having this asset in order to sustain. This study measured human capital as by total wages of employees over total assets (Ting and Lean, 2009; Pratt, 2011).

1.11 Thesis Outline

The outline of the thesis is as follows; first chapter describes the general overview, problem statement and objectives. Second chapter presents the detailed literature for capital structure determinants, human capital and prevailing theories. Third chapter describes the methodology. Sample is presented together with explanations of proxies and statistical models. Data analysis has been carried out in fourth chapter where results have been reported. Last chapter concludes the thesis with explanation of empirical findings and suggestions on future research.

REFERENCES

- Abeysekera, I. (2006). Managing Human Capital in a Privately Owned Public Hotel Chain. *International Journal of Hospitality Management*, 25(4), 586-601.
- Abor, J. and Biekpe, N. (2006). SMEs' Access to Debt Finance: A Comparison of Male-owned and Female-owned Businesses in Ghana. *The International Journal of Entrepreneurship and Innovation*, 7(2), 105-112.
- Abor, J. and Biekpe, N. (2007). Corporate Governance, Ownership Structure and Performance of SMEs in Ghana: Implications for Financing Opportunities. *Corporate Governance*, 7(3), 288-300.
- Abor, J. and Biekpe, N. (2009). How Do We Explain the Capital Structure of SMEs in Sub-Saharan Africa?: Evidence from Ghana. *Journal of Economic Studies*, 36(1), 83-97.
- Adedeji, A. (1998). Does the Pecking Order Hypothesis Explain the Dividend Payout Ratios of Firms in the UK? *Journal of Business Finance & Accounting*, 25(9-10), 1127-1155.
- Afza, T. and Hussain, A. (2011). Determinants of Capital Structure Across Selected Manufacturing Sectors of Pakistan. *International Journal of Humanities and Social Science*, 1(12), 254-262.
- Ahmad, F., Nasir, R. U., Ali, M. and Ullah, W. (2011). Extension of Determinants of Capital Structure: Evidence from Pakistani Non-financial Firms. *African Journal of Business Management*, 5(28), 11375-11385.
- Ahmed, A. and Jha, M. K. (2008). Status Of Petroleum Sector In Pakistan-A Review. *Oil and Gas Bus.*
- Ahn, J. (2006). Nonstandard Work in Japan and Korea-the Origin of Wage Differentials. *Unpublished manuscript, Japan Institute for Labor Policy and Training, Tokyo.*

- Akbar, U. S. and Bhutto, N. A. (2012). Determinants and Policies of Capital Structure in the Non-financial Firms (Personal Care Goods) of Pakistan. *Asian Journal of Business and Management Sciences*, 2(2), 27-35.
- Akhtar, P. and Masood, S. (2013). "Analysis of Capital Structure Determinant" A Case from Pakistan's Chemical Sector Companies Listed at Karachi Stock Exchange. *International Journal of Business and Social Research*, 3(5), 43-49.
- Akhtar, S. (2005). The Determinants of Capital Structure for Australian Multinational and Domestic Corporations. *Australian Journal of Management*, 30(2), 321-341.
- Akhtar, S. and Oliver, B. (2009). Determinants of Capital Structure for Japanese Multinational and Domestic Corporations. *International Review of Finance*, 9(1-2), 1-26.
- Akintoye, I. (2008). Effect of Capital Structure on Firms' Performance: The Nigerian Experience. *European Journal of Economics, Finance and Administrative Sciences*, 10, 233-243.
- Akyol, A. C. and Verwijmeren, P. (2013). Human Capital Costs, Firm Leverage, and Unemployment Rates. *Journal of Financial Intermediation*, 22(3), 464-481.
- Al-Farisi, A. S. and Hendrawan, R. (2012). Effect of Capital Structure on Banks Performance: A Profit Efficiency Approach Islamic and Conventional Banks Case in Indonesia. *International Research Journal of Finance and Economics*, (86), 6-19.
- Al-Najjar, B. and Hussainey, K. (2011). Revisiting the Capital-structure Puzzle: UK Evidence. *Journal of Risk Finance*, 12(4), 329-338.
- Al-Sakran, S. A. (2001). Leverage Determinants in the Absence of Corporate Tax System: The Case of Non-financial Publicly Traded Corporations in Saudi Arabia. *Managerial Finance*, 27(10/11), 58-86.
- Al-Najjar, B. (2011). The Inter-relationship between Capital Structure and Dividend Policy: Empirical Evidence from Jordanian Data. *International Review of Applied Economics*, 25(2), 209-224.
- Alimari, M. B. (2003). *The Determinants of Corporate Borrowing in the Arab World*. Oklahoma State University.

- Allen, D. E. (1993). The Pecking Order Hypothesis: Australian Evidence. *Applied Financial Economics*, 3(2), 101-112.
- Allen, F., Qian, J. and Qian, M. (2005). Law, Finance, and Economic Growth in China. *Journal of financial economics*, 77(1), 57-116.
- Allen, M. T. (1995). Capital Structure Determinants in Real Estate Limited Partnerships. *Financial Review*, 30(3), 399-426.
- Alti, A. (2006). How Persistent is the Impact of Market Timing on Capital Structure? *The Journal of Finance*, 61(4), 1681-1710.
- Alves, P. F. P. and Ferreira, M. A. (2011). Capital Structure and Law Around the World. *Journal of Multinational Financial Management*, 21(3), 119-150.
- Amable, B. and Chatelain, J.-B. (2001). Can Financial Infrastructures Foster Economic Development? *Journal of Development Economics*, 64(2), 481-498.
- Amidu, M. (2007). Determinants of Capital Structure of Banks in Ghana: An Empirical Approach. *Baltic Journal of Management*, 2(1), 67-79.
- Anake, A. F., Obim, E. N. and Eke, F. A. (2014). Determinants of Financial Structure: Evidence from Nigerian Quoted Firms. *Research Journal of Finance and Accounting*, 5(16), 53-66.
- Antão, P. and Bonfim, D. (2012). The Dynamics of Capital Structure Decisions. *Banco de Portugal, Economics and Research Department Av. Almirante Reis*, 71, 1150-1012.
- Antoniou, A., Guney, Y. and Paudyal, K. (2002). *The Determinants of Corporate Capital Structure: Evidence from European Countries*: University of Durham, Department of Economics and Finance.
- Antoniou, A., Guney, Y. and Paudyal, K. (2008). The Determinants of Capital Structure: Capital Market-oriented versus Bank-oriented Institutions. *Journal of Financial and Quantitative Analysis*, 43(01), 59-92.
- Arbabiyan, A.-A. and Safari, M. (2009). The Effects of Capital Structure and Profitability in the Listed Firms in Tehran Stock Exchange. *Journal of Management Perspective*, 33, 159-175.
- Arbache, J. S. (2001). Wage Differentials in Brazil: Theory and Evidence. *Journal of Development Studies*, 38(2), 109-130.

- Arellano, M. and Bover, O. (1995). Another Look at the Instrumental Variable Estimation of Error-components Models. *Journal of Econometrics*, 68(1), 29-51.
- Athanasoglou, P. P., Brissimis, S. N. and Delis, M. D. (2008). Bank-specific, industry-specific and macroeconomic determinants of bank profitability. *Journal of international financial Markets, Institutions and Money*, 18(2), 121-136.
- Atiyet, B. A. (2012). The Pecking Order Theory and the Static Trade Off Theory: Comparison of the Alternative Explanatory Power in French Firms. *Journal of Business Studies Quarterly*, 4(1).
- Auerbach, A. J. (1985). Real Determinants of Corporate Leverage *Corporate Capital Structures in the United States* (pp. 301-324): University of Chicago Press.
- Autore, D. and Kovacs, T. (2005). The Pecking Order Theory and Time-varying Adverse Selection Costs. *Unpublished Manuscript. Virginia Tech University*.
- Awan, T. N., Rashid, M. and Zia-ur-Rehman, M. (2011). Analysis of the Determinants of Capital Structure in Sugar and Allied Industry. *International Journal of Business and Social Science*, 2(1), 221-229.
- Ayyagari, M., Demirgüç-Kunt, A. and Maksimovic, V. (2010). Formal versus Informal Finance: Evidence from China. *Review of Financial Studies*, 23(8), 3048-3097.
- Ba-Abbad, K. and Ahmad-Zaluki, N. A. (2012). The Determinants of Capital Structure of Qatari Listed Companies. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 2(2), 93-108.
- Baek, J. S., Kang, J. K. and Lee, I. (2006). Business Groups and Tunneling: Evidence from Private Securities Offerings by Korean Chaebols. *The Journal of Finance*, 61(5), 2415-2449.
- Bai, C. E., Lu, J. and Tao, Z. (2006). Property Rights Protection and Access to Bank Loans. *Economics of Transition*, 14(4), 611-628.
- Baker, M. and Wurgler, J. (2002). Market Timing and Capital Structure. *The Journal of Finance*, 57(1), 1-32.
- Balakrishnan, S. and Fox, I. (1993). Asset Specificity, Firm Heterogeneity and Capital Structure. *Strategic Management Journal*, 14(1), 3-16.
- Baltagi, B. H. (2005). *Econometric Analysis of Panel Data* (3rd ed.).

- Bancel, F. and Mittoo, U. R. (2004). Cross-country Determinants of Capital Structure Choice: A Survey of European Firms. *Financial Management*, 33, 103-132.
- Banerjee, S., Heshmati, A. and Wihlborg, C. (2004). The Dynamics of Capital Structure. *Research in Banking and Finance*, 4(1), 275-297.
- Baral, K. J. (2004). Determinants of Capital Structure: A Case Study of Listed Companies of Nepal. *Journal of Nepalese Business Studies*, 1(1), 1-13.
- Barclay, M. J. and Smith, C. W. (1996). On Financial Architecture: Leverage, Maturity and Priority. *Journal of Applied Corporate Finance*, 8(4), 4-17.
- Barclay, M. J. and Smith, C. W. (1999). The Capital Structure Puzzle: Another Look at the Evidence. *Journal of Applied Corporate Finance*, 12(1), 8-20.
- Barclay, M. J., Smith, C. W. and Watts, R. L. (1995). The Determinants Of Corporate Leverage And Dividend Policies. *Journal of Applied Corporate Finance*, 7(4), 4-19.
- Bartholdy, J. and Mateus, C. (2008). Taxes and Corporate Debt Policy: Evidence for Unlisted Firms of Sixteen European Countries. *Available at SSRN 1098370*.
- Barton, S. L., Hill, N. C. and Sundaram, S. (1989). An Empirical Test of Stakeholder Theory Predictions of Capital Structure. *Financial Management*, 36-44.
- Baskin, J. (1989). An Empirical Investigation of the Pecking Order Hypothesis. *Financial Management*, 26-35.
- Bassi, L. J., Lev, B., Low, J., McMurrer, D. P. and Siesfeld, G. A. (2000). Measuring Corporate Investments in Human Capital. *The New Relationship: Human Capital in the American Corporation*, 334-381.
- Bauer, P. (2004). Capital Structure of Listed Companies in Visegrad Countries. *Prague Economic Papers*, 2, 159-175.
- Baxter, N. D. (1967). Leverage, Risk of Ruin and the Cost of Capital. *the Journal of Finance*, 22(3), 395-403.
- Beattie, V., Goodacre, A. and Thomson, S. J. (2006). International Lease-accounting Reform and Economic Consequences: The Views of UK Users and Preparers. *The International Journal of Accounting*, 41(1), 75-103.
- Benito, A. and Hernando, I. (2007). Firm Behaviour and Financial Pressure: Evidence from Spanish Panel Data. *Bulletin of Economic Research*, 59(4), 283-311.

- Benson Durham, J. (2002). The Effects of Stock Market Development on Growth and Private Investment in Lower-income Countries. *Emerging Markets Review*, 3(3), 211-232.
- Berger, P. G., Ofek, E. and Yermack, D. L. (1997). Managerial Entrenchment and Capital Structure Decisions. *The Journal of Finance*, 52(4), 1411-1438.
- Berggren, B., Olofsson, C. and Silver, L. (2000). Control Aversion and the Search for External Financing in Swedish SMEs. *Small Business Economics*, 15, 233-242.
- Berk, J. B., Stanton, R. and Zechner, J. (2010). Human Capital, Bankruptcy, and Capital Structure. *The Journal of Finance*, 65(3), 891-926.
- Berkovitch, E., Israel, R. and Spiegel, Y. (2000). Managerial Compensation and Capital Structure. *Journal of Economics & Management Strategy*, 9(4), 549-584.
- Bessler, W., Drobetz, W. and Kazemieh, R. (2011). Factors Affecting Capital Structure Decisions. *Capital Structure and Corporate Financing Decisions: Theory, Evidence, and Practice*, 15, 17.
- Bevan, A. A. and Danbolt, J. (2000). Dynamics in the Determinants of Capital Structure in the UK.
- Bevan, A. A. and Danbolt, J. (2002). Capital Structure and its Determinants in the UK-A Decompositional Analysis. *Applied Financial Economics*, 12(3), 159-170.
- Bevan, A. A. and Danbolt, J. (2004). Testing for Inconsistencies in the Estimation of UK Capital Structure Determinants. *Applied Financial Economics*, 14(1), 55-66.
- Bhaduri, S. N. (2002). Determinants of Capital Structure Choice: A Study of the Indian Corporate Sector. *Applied Financial Economics*, 12(9), 655-665.
- Bharath, S. T., Pasquariello, P. and Wu, G. (2009). Does Asymmetric Information Drive Capital Structure Decisions? *Review of Financial Studies*, 22(8), 3211-3243.
- Bhattacharya, S. (1979). Imperfect Information, Dividend Policy, and "the Bird in the Hand" Fallacy. *The Bell Journal of Economics*, 259-270.
- Binks, M. R. and Ennew, C. T. (1996). Growing Firms and the Credit Constraint. *Small Business Economics*, 8(1), 17-25.

- Bishop, S., Faff, R., Oliver, B. and Twite, G. (2004). *Corporate Finance*: Pearson Education.
- Bistrova, J., Lace, N. and Peleckienė, V. (2011). The Influence of Capital Structure on Baltic Corporate Performance. *Journal of Business Economics and Management*, 12(4), 655-669.
- Blazenko, G. W. (1987). Managerial Preference, Asymmetric Information, and Financial Structure. *The Journal of Finance*, 42(4), 839-862.
- Booth, L., Aivazian, V., Demirguc-Kunt, A. and Maksimovic, V. (2001). Capital Structures in Developing Countries. *The Journal of Finance*, 56(1), 87-130.
- Bowen, R. M., Daley, L. A. and Huber Jr, C. C. (1982). Evidence on the Existence and Determinants of Inter-industry Differences in Leverage. *Financial Management*, 10-20.
- Bowen, R. M., Noreen, E. W. and Lacey, J. M. (1981). Determinants of the Corporate Decision to Capitalize Interest. *Journal of Accounting and Economics*, 3(2), 151-179.
- Bradley, M., Jarrell, G. A. and Kim, E. (1984). On the Existence of an Optimal Capital Structure: Theory and Evidence. *The Journal of Finance*, 39(3), 857-878.
- Brazen, L. (2004). The ROI of Human Capital: Measuring the Economic Value of Employee Performance. *AORN Journal*, 80(6), 1146.
- Brealey, R., Leland, H. E. and Pyle, D. H. (1977). Informational Asymmetries, Financial Structure, and Financial Intermediation. *The Journal of Finance*, 32(2), 371-387.
- Brennan, M. and Kraus, A. (1987). Efficient Financing under Asymmetric Information. *The Journal of Finance*, 42(5), 1225-1243.
- Brounen, D., De Jong, A. and Koedijk, K. (2006). Capital Structure Policies in Europe: Survey Evidence. *Journal of Banking & Finance*, 30(5), 1409-1442.
- Bruinshoofd, W. A. and De Haan, L. (2011). Is the Negative Relation Between Leverage and Historical Market-To-Book Specific to US and Information and Communication Technology Firms?*. *International Review of Finance*, 11(2), 227-243.
- Brummet, R. L., Flamholtz, E. G. and Pyle, W. C. (1968). Human Resource Measurement--A Challenge for Accountants. *Accounting Review*, 217-224.

- Buferna, F. M., Bangassa, K. and Hodgkinson, L. (2005). *Determinants of Capital Structure: Evidence from Libya* (Vol. 8): Citeseer.
- Burgman, T. A. (1996). An Empirical Examination of Multinational Corporate Capital Structure. *Journal of International Business Studies*, 553-570.
- Byoun, S. (2008). How and When Do Firms Adjust their Capital Structures Toward Targets? *The Journal of Finance*, 63(6), 3069-3096.
- Cassar, G. (2004). The Financing of Business Start-ups. *Journal of Business Venturing*, 19(2), 261-283.
- Cassar, G. and Holmes, S. (2003). Capital Structure and Financing of SMEs: Australian Evidence. *Accounting & Finance*, 43(2), 123-147.
- Castanias, R. (1983). Bankruptcy Risk and Optimal Capital Structure. *The Journal of Finance*, 38(5), 1617-1635.
- Chakraborty, I. (2010). Capital Structure in an Emerging Stock Market: The Case of India. *Research in International Business and Finance*, 24(3), 295-314.
- Chakraborty, I. (2013). Does Capital Structure Depend on Group Affiliation? An Analysis of Indian Firms. *Journal of Policy Modeling*, 35(1), 110-120.
- Chang, C. (1999). Capital Structure as Optimal Contracts. *The North American Journal of Economics and Finance*, 10(2), 363-385.
- Chang, C., Chen, X. and Liao, G. (2014). What are the Reliably Important Determinants of Capital Structure in China? *Pacific-Basin Finance Journal*, 30(0), 87-113.
- Chang, C., Lee, A. C. and Lee, C. F. (2009). Determinants of Capital Structure Choice: A Structural Equation Modeling Approach. *The Quarterly Review of Economics and Finance*, 49(2), 197-213.
- Chaplinsky, S. and Niehaus, G. (1993). Do Inside Ownership and Leverage Share Common Determinants? *Quarterly Journal of Business and Economics*, 51-65.
- Charalambakis, E. C., Espenlauby, S. and Garrett, I. (2009). Assessing the Probability of Financial Distress of UK Firms: Working Paper.
- Chaudhry, H. F. (2014). Financial Leverage and Service Sector Firms. *IOSR Journal of Mathematics (IOSR-JM)*, 10(1), 39-42.

- Chemmanur, T. J., Cheng, Y. and Zhang, T. (2013). Human Capital, Capital Structure, and Employee Pay: An Empirical Analysis. *Journal of Financial Economics*, 110(2), 478-502.
- Chen, D.-H., Chen, C.-D., Chen, J. and Huang, Y.-F. (2013). Panel Data Analyses of the Pecking Order Theory and the Market Timing Theory of Capital Structure in Taiwan. *International Review of Economics & Finance*, 27(0), 1-13.
- Chen, J. and Strange, R. (2005). The Determinants of Capital Structure: Evidence from Chinese Listed Companies. *Economic Change and Restructuring*, 38(1), 11-35.
- Chen, J. J. (2004). Determinants of Capital Structure of Chinese-listed Companies. *Journal of Business research*, 57(12), 1341-1351.
- Chen, L.-J. and Chen, S.-Y. (2011a). How the Pecking-Order Theory Explain Capital Structure. *Journal of International Management Studies*, 6(2).
- Chen, L. and Zhao, X. (2006). On the Relation between the Market-to-book Ratio, Growth Opportunity, and Leverage Ratio. *Finance Research Letters*, 3(4), 253-266.
- Chen, L. H., Lensink, R. and Sterken, E. (1999). *The Determinants of Capital Structure: Evidence from Dutch Panel Data*: University of Groningen.
- Chen, S.-Y. and Chen, L.-J. (2011b). Capital Structure Determinants: An Empirical Study in Taiwan. *African Journal of Business Management*, 5(27), 10974-10983.
- Cheng, S.-R. and Shiu, C.-Y. (2007). Investor Protection and Capital Structure: International Evidence. *Journal of Multinational Financial Management*, 17(1), 30-44.
- Chittenden, F., Hall, G. and Hutchinson, P. (1996). Small Firm Growth, Access to Capital Markets and Financial Structure: Review of Issues and an Empirical Investigation. *Small Business Economics*, 8(1), 59-67.
- Chui, A. C., Lloyd, A. E. and Kwok, C. C. (2002). The Determination of Capital Structure: Is National Culture a Missing Piece to the Puzzle? *Journal of international business studies*, 33(1), 99-127.
- Chung, K. H. (1993). Asset Characteristics and Corporate Debt Policy: An Empirical Test. *Journal of Business Finance & Accounting*, 20(1), 83-98.

- Claessens, S., Djankov, S., Fan, J. P. and Lang, L. H. (2002). Disentangling the Incentive and Entrenchment Effects of Large Shareholdings. *The Journal of Finance*, 57(6), 2741-2771.
- Clark, B. J., Francis, B. B. and Hasan, I. (2009). Do Firms Adjust toward Target Capital Structures? Some International Evidence. *Some International Evidence*.
- Cole, R. (2008). What Do We Know about the Capital Structure of Privately Held Firms? Evidence from the Surveys of Small Business Finance.
- Constantinides, G. M. and Grundy, B. D. (1989). Optimal Investment with Stock Repurchase and Financing as Signals. *Review of Financial Studies*, 2(4), 445-465.
- Corbett, J., Edwards, J., Jenkinson, T., Mayer, C. and Sussman, O. (2004). A Response to Hackethal and Schmidt (2003) "Financing Patterns: Measurement Concepts and Empirical Results". *Saïd Business School, Oxford University, mimeo*.
- Cressy, R. (1996). Are Business Start-ups Rationed? *Economic Journal*, 106(438), 1253-1270.
- Dalmahoy, M. (1996). Putting a value on people. *MANAGEMENT ACCOUNTING-LONDON-*, 74, 27-27.
- Dang, V. A., Kim, M. and Shin, Y. (2012). Asymmetric capital structure adjustments: New evidence from dynamic panel threshold models. *Journal of Empirical Finance*, 19(4), 465-482.
- Dasgupta, S. and Sengupta, K. (1993). Sunk investment, bargaining and choice of capital structure. *International Economic Review*, 203-220.
- Daskalakis, N. and Psillaki, M. (2008). Do country or firm factors explain capital structure? Evidence from SMEs in France and Greece. *Applied financial economics*, 18(2), 87-97.
- Dawood, M. H. A. K., Moustafa, E.-S. I. and El-Hennawi, M. S. (2011). The Determinants of Capital Structure in Listed Egyptian Corporations. *Middle Eastern Finance and Economics*, (9), 83-99.
- 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 & Finance*, 32(9), 1954-1969.

- DeAngelo, H., DeAngelo, L. and Stulz, R. M. (2006). Dividend policy and the earned/contributed capital mix: a test of the life-cycle theory. *Journal of Financial economics*, 81(2), 227-254.
- DeAngelo, H. and Masulis, R. W. (1980). Optimal capital structure under corporate and personal taxation. *Journal of financial Economics*, 8(1), 3-29.
- Deesomsak, R., Paudyal, K. and Pescetto, G. (2004). The determinants of capital structure: evidence from the Asia Pacific region. *Journal of multinational financial management*, 14(4), 387-405.
- Degryse, H., de Goeij, P. and Kappert, P. (2012). The impact of firm and industry characteristics on small firms' capital structure. *Small Business Economics*, 38(4), 431-447.
- Delcours, N. (2007). The determinants of capital structure in transitional economies. *International Review of Economics & Finance*, 16(3), 400-415.
- Demirgüç-Kunt, A. and Maksimovic, V. (1998). Law, finance, and firm growth. *The Journal of Finance*, 53(6), 2107-2137.
- Denis, D. J. and McKeon, S. B. (2012). Debt financing and financial flexibility evidence from proactive leverage increases. *Review of Financial Studies*, 25(6), 1897-1929.
- Diamond, D. W. (1989). Reputation acquisition in debt markets. *The journal of political economy*, 828-862.
- Diamond, D. W. (1991). Debt maturity structure and liquidity risk. *The Quarterly Journal of Economics*, 709-737.
- Dietrich, A. and Wanzenried, G. (2011). Determinants of bank profitability before and during the crisis: Evidence from Switzerland. *Journal of International Financial Markets, Institutions and Money*, 21(3), 307-327.
- Dittmar, A. and Thakor, A. (2007). Why do firms issue equity? *The Journal of Finance*, 62(1), 1-54.
- Dragota, I.-M., Dragota, V., Obreja, L. and Semenescu, A. (2008). Capital structure determinants: A sectorial analysis for the Romanian listed companies. *Economic Computation and Economic Cybernetics Studies and Research*, 42(1-2), 155-172.

- Drobetz, W., Gounopoulos, D., Merikas, A. and Schröder, H. (2013). Capital structure decisions of globally-listed shipping companies. *Transportation Research Part E: Logistics and Transportation Review*, 52, 49-76.
- Ebadi, M., Thim, C. K. and Choong, Y. V. (2011). Impact of Firm Characteristics on Capital Structure of Iranian Listed Firms. *European Journal of Economics, Finance and Administrative Sciences*, (42), 160-171.
- Edvinsson, L. and Sullivan, P. (1996). Developing a model for managing intellectual capital. *European management journal*, 14(4), 356-364.
- Eldomiaty, T. I. (2008). Determinants of corporate capital structure: evidence from an emerging economy. *International Journal of Commerce and Management*, 17(1/2), 25-43.
- Elliott, W. B., Koëter-Kant, J. and Warr, R. S. (2008). Market timing and the debt–equity choice. *Journal of Financial Intermediation*, 17(2), 175-197.
- Eriotis, N., Vasiliou, D. and Ventoura-Neokosmidi, Z. (2007). How firm characteristics affect capital structure: an empirical study. *Managerial Finance*, 33(5), 321-331.
- Esperança, J. P., Gama, A. P. M. and Gulamhussen, M. A. (2003). Corporate debt policy of small firms: an empirical (re) examination. *Journal of Small Business and Enterprise Development*, 10(1), 62-80.
- Ezeoha, A. E. (2008). Firm size and corporate financial-leverage choice in a developing economy: evidence from Nigeria. *Journal of Risk Finance, The*, 9(4), 351-364.
- Fama, E. F. and French, K. R. (2001). Disappearing dividends: changing firm characteristics or lower propensity to pay? *Journal of Financial economics*, 60(1), 3-43.
- Fama, E. F. and French, K. R. (2002). Testing trade-off and pecking order predictions about dividends and debt. *Review of Financial Studies*, 15(1), 1-33.
- Fama, E. F. and French, K. R. (2005). Financing decisions: Who Issues Stock? . *Journal of Financial Economics*, 76(3), 549-582.
- Fan, J. P., Rui, O. M. and Zhao, M. (2008). Public governance and corporate finance: Evidence from corruption cases. *Journal of Comparative Economics*, 36(3), 343-364.

- Farhat, J., Cotei, C. and Abugri, B. A. (2006). The pecking order hypothesis vs. the static trade-off theory under different institutional environments. *preliminary draft*, 39.
- Fattouh, B., Scaramozzino, P. and Harris, L. (2005). Capital structure in South Korea: a quantile regression approach. *Journal of Development Economics*, 76(1), 231-250.
- Faulkender, M., Flannery, M. J., Hankins, K. W. and Smith, J. M. (2012). Cash flows and leverage adjustments. *Journal of Financial economics*, 103(3), 632-646.
- Feidakis, A. and Rovolis, A. (2007). Capital structure choice in European Union: evidence from the construction industry 1. *Applied Financial Economics*, 17(12), 989-1002.
- Fischer, E. O., Heinkel, R. and Zechner, J. (1989). Dynamic capital structure choice: Theory and tests. *The Journal of Finance*, 44(1), 19-40.
- Flannery, M. and Hankins, K. (2007). A theory of capital structure adjustment speed. *Unpublished Manuscript, University of Florida*.
- Flannery, M. J., Kwan, S. H. and Nimalendran, M. (2004). Market evidence on the opaqueness of banking firms' assets. *Journal of Financial Economics*, 71(3), 419-460.
- Flannery, M. J. and Rangan, K. P. (2006). Partial adjustment toward target capital structures. *Journal of Financial Economics*, 79(3), 469-506.
- Fox, J. T. (2009). Firm-Size Wage Gaps, Job Responsibility, and Hierarchical Matching. *Journal of Labor Economics*, 27(1), 83-126.
- Frank, M. Z. and Goyal, V. K. (2003a). Testing the pecking order theory of capital structure. *Journal of Financial Economics*, 67(2), 217-248.
- Frank, M. Z. and Goyal, V. K. (2003b). Capital Structure Decisions. *San Diego Meetings*, Available at SSRN: <http://ssrn.com/abstract=396020>
- Frank, M. Z. and Goyal, V. K. (2004). The effect of market conditions on capital structure adjustment. *Finance Research Letters*, 1(1), 47-55.
- Frank, M. Z. and Goyal, V. K. (2005). Trade-off and pecking order theories of debt. *Handbook of empirical corporate finance*, 2, 135-202.
- Frank, M. Z. and Goyal, V. K. (2009a). Capital structure decisions: which factors are reliably important? *Financial Management*, 38(1), 1-37.
- Frank, M. Z. and Goyal, V. K. (2009b). Profits and capital structure.

- Frazier, P. A., Tix, A. P. and Barron, K. E. (2004). Testing moderator and mediator effects in counseling psychology research. *Journal of counseling psychology*, 51(1), 115.
- Friend, I. and Lang, L. H. (1988). An Empirical Test of the Impact of Managerial Self-interest on Corporate Capital Structure. *The Journal of Finance*, 43(2), 271-281.
- Garg, S. B. (1988). Optimum Capital Structure: Theory and the Indian Experience. *M. Phil diss. Department of Economics, The University of Delhi*.
- Gaud, P., Jani, E., Hoesli, M. and Bender, A. (2005). The capital structure of Swiss companies: an empirical analysis using dynamic panel data. *European Financial Management*, 11(1), 51-69.
- Ghani, K. and Bukhari, S. H. (2010). Determinants of Capital Structure: A Case of Listed Energy Sector Companies in Pakistan. *Available at SSRN 1860706*.
- Gomes, J. F. and Schmid, L. (2010). Levered returns. *The Journal of Finance*, 65(2), 467-494.
- Graham, A. B. and Pizzo, V. G. (1996). A question of balance: case studies in strategic knowledge management. *European Management Journal*, 14(4), 338-346.
- Graham, J. R. (1996). Proxies for the corporate marginal tax rate. *Journal of Financial Economics*, 42(2), 187-221.
- Graham, J. R. (2000). How big are the tax benefits of debt? *The Journal of Finance*, 55(5), 1901-1941.
- Graham, J. R. and Harvey, C. R. (2001). The theory and practice of corporate finance: evidence from the field. *Journal of financial economics*, 60(2), 187-243.
- Graham, J. R. and Leary, M. T. (2011). A review of empirical capital structure research and directions for the future. *Annu. Rev. Financ. Econ.*, 3(1), 309-345.
- Graham, J. R., Lemmon, M. L. and Schallheim, J. S. (1998). Debt, leases, taxes, and the endogeneity of corporate tax status. *The Journal of Finance*, 53(1), 131-162.
- Green, C. J., Murinde, V. and Suppakitjarak, J. (2002). Corporate financial structures in India.

- Gröjer, J.-E. and Johanson, U. (1998). Current development in human resource costing and accounting: reality present, researchers absent? *Accounting, Auditing & Accountability Journal*, 11(4), 495-506.
- Grossman, S. J. and Hart, O. D. (1982). Corporate financial structure and managerial incentives *The economics of information and uncertainty* (pp. 107-140): University of Chicago Press.
- Grullon, G., Michaely, R. and Swaminathan, B. (2002). Are Dividend Changes a Sign of Firm Maturity?*. *The Journal of Business*, 75(3), 387-424.
- Haas, R. and Peeters, M. (2006). The dynamic adjustment towards target capital structures of firms in transition economies. *Economics of Transition*, 14(1), 133-169.
- Hadlock, C. J. and James, C. M. (2002). Do banks provide financial slack? *the Journal of Finance*, 57(3), 1383-1419.
- Hall, G., Hutchinson, P. and Michaelas, N. (2000). Industry effects on the determinants of unquoted SMEs' capital structure. *International journal of the economics of business*, 7(3), 297-312.
- Hall, G. C., Hutchinson, P. J. and Michaelas, N. (2004). Determinants of the capital structures of European SMEs. *Journal of Business Finance & Accounting*, 31(5-6), 711-728.
- Hamilton, J. D. (2009). Causes and consequences of the oil shock of 2007–08. *Brookings Papers on Economic Activity*, Spring, 215–259.
- Harris, M. and Raviv, A. (1990). Capital structure and the informational role of debt. *The Journal of Finance*, 45(2), 321-349.
- Harris, M. and Raviv, A. (1991). The theory of capital structure. *the Journal of Finance*, 46(1), 297-355.
- Hart, O. and Moore, J. (1995). A theory of debt based on the inalienability of human capital: National Bureau of Economic Research.
- Harvey, C. R., Lins, K. V. and Roper, A. H. (2004). The effect of capital structure when expected agency costs are extreme. *Journal of Financial Economics*, 74(1), 3-30.
- He, X. and Cao, Y. (2007). Understanding high saving rate in China. *China & World Economy*, 15(1), 1-13.

- Heckmian, J. S. and Jones, C. H. (1967). Put people on your balance sheet. *Harvard Business Review*, 45, 105-113.
- Heinkel, R. (1982). A theory of capital structure relevance under imperfect information. *The Journal of Finance*, 37(5), 1141-1150.
- Heinkel, R. and Zechner, J. (1990). The Role of Debt and Preferred Stock as a Solution to Adverse Investment Incentives. *Journal of Financial and Quantitative Analysis*, 25(01), 1-24.
- Hennessy, C. A. and Whited, T. M. (2005). Debt dynamics. *The Journal of Finance*, 60(3), 1129-1165.
- Hernádi, P. and Ormos, M. (2012). Capital structure and its choice in Central and Eastern Europe. *Acta Oeconomica*, 62(2), 229-263.
- Heshmati, A. (2001). The dynamics of capital structure: Evidence from Swedish micro and small firms. *Research in Banking and Finance*, 2(1), 199-241.
- Hijazi, S. T. and Tariq, Y. B. (2006). Determinants of capital structure: a case for the Pakistani cement industry. *The Lahore Journal of Economics*, 11(1), 63-80.
- Himmelberg, C. P., Hubbard, R. G. and Palia, D. (1999). Understanding the determinants of managerial ownership and the link between ownership and performance. *Journal of financial economics*, 53(3), 353-384.
- Homaifar, G., Zietz, J. and Benkato, O. (1994). An empirical model of capital structure: some new evidence. *Journal of Business Finance & Accounting*, 21(1), 1-14.
- Honhyan, Y. (2009). The determinants of capital structure of the smes: An empirical study of chinese listed manufacturing companies. *School of Management, Beijing Union University, China*.
- Hovakimian, A. (2006). Are observed capital structures determined by equity market timing? *Journal of Financial and Quantitative Analysis*, 41(01), 221-243.
- Hovakimian, A. and Li, G. (2011). In search of conclusive evidence: How to test for adjustment to target capital structure. *Journal of Corporate Finance*, 17(1), 33-44.
- Hovakimian, A., Opler, T. and Titman, S. (2001). The debt-equity choice. *Journal of Financial and Quantitative analysis*, 36(01), 1-24.
- Hsia, C. C. (1981). Coherence of the modern theories of finance. *Financial Review*, 16(1), 27-42.

- Hsu, K.-H. and Hsu, C.-Y. (2011). Capital structure and financing decision - Evidence from the four Asian Tigers and Japan. *African Journal of Business Management*, 5(15), 6527-6540.
- Huang, G. and Song, F. M. (2006). The determinants of capital structure: evidence from China. *China Economic Review*, 17(1), 14-36.
- Huang, R. and Ritter, J. R. (2009). Testing theories of capital structure and estimating the speed of adjustment. *Journal of Financial and Quantitative analysis*, 44(02), 237-271.
- Hunjra, A. I., Bilal, M., Shafi, H. and Ullah, I. (2011). Patterns of capital structure and dividend policy in Pakistani corporate sector and their impact on organization performance. *African Journal of Business Management*, 5(27), 11060-11067.
- Hussain, J. and Matlay, H. (2007). Financing preferences of ethnic minority owner/managers in the UK. *Journal of Small Business and Enterprise Development*, 14(3), 487-500.
- Iliev, P. and Welch, I. (2010). Reconciling estimates of the speed of adjustment of leverage ratios. *Unpublished working paper, Pennsylvania State University and Brown University*.
- Jaggia, P. B. and Thakor, A. V. (1994). Firm-specific human capital and optimal capital structure. *International Economic Review*, 283-308.
- Jahanzeb, A., Khan, S. U. R. and Bajuri, N. H. (2014). Determinants of Capital Structure and Human Capital. *International Journal of Information Processing and Management*, 5(4), 114-123.
- Javid, A. Y. and Imad, Q. (2012). A Decomposition Analysis of Capital Structure: Evidence from Pakistan's Manufacturing Sector. *The Lahore Journal of Economics*, 17(1), 1-31.
- Jensen, M. C. (1986). Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *The American Economic Review*, 323-329.
- Jensen, M. C. and Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure. *Journal of Financial Economics*, 3, 305-360.
- Jõeveer, K. and Pank, E. (2006). *Sources of capital structure: Evidence from transition countries: Eesti Pank*.

- Johansen, A. and Bartholdy, J. (2011). *Determinants of Capital Structure during Credit Bubble and Credit Crunch*. University of Aarhus.
- John, K. (1987). Risk-Shifting Incentives and Signalling Through Corporate Capital Structure. *The Journal of Finance*, 42(3), 623-641.
- John, K. and Williams, J. (1985). Dividends, dilution, and taxes: A signalling equilibrium. *The Journal of Finance*, 40(4), 1053-1070.
- Johnson, S. A. (1997). An empirical analysis of the determinants of corporate debt ownership structure. *Journal of Financial and Quantitative Analysis*, 32(01), 47-69.
- Johnson, T. (1970). Returns from investment in human capital. *The American Economic Review*, 546-560.
- Kale, J. R., Noe, T. H. and Ramirez, G. G. (1991). The effect of business risk on corporate capital structure: Theory and evidence. *The Journal of Finance*, 46(5), 1693-1715.
- Kanwar, A. A. (2007). Booth Revisited: Identifying the Determinants of Capital Structure in the Sugar Sector. *Market Forces*.
- Kayhan, A. and Titman, S. (2007). Firms' histories and their capital structures. *Journal of Financial Economics*, 83(1), 1-32.
- Kester, C. W. (1986). Capital and ownership structure: a comparison of United States and Japanese manufacturing corporations. *Financial Management*, 15, 5-16.
- Khan, A. A. and Khan, M. (2010). Pakistan Textile Industry Facing New Challenges. *Research Journal of International Studies*, 14, 21-29.
- Kim, E. H. (1978). A mean-variance theory of optimal capital structure and corporate debt capacity. *The Journal of Finance*, 33(1), 45-63.
- Kim, H. (2011). Does human capital specificity affect employer capital structure? evidence from a natural experiment: working paper, Duke University.
- Kim, H. and Berger, P. D. (2008). A comparison of capital structure determinants: The United States and the Republic of Korea. *Multinational Business Review*, 16(1), 79-100.
- Kim, H., Heshmati, A. and Aoun, D. (2006). Dynamics of Capital Structure: The Case of Korean Listed Manufacturing Companies*. *Asian Economic Journal*, 20(3), 275-302.

- Kim, W. S. and Sorensen, E. H. (1986). Evidence on the impact of the agency costs of debt on corporate debt policy. *Journal of Financial and quantitative analysis*, 21(02), 131-144.
- King, M. R. and Santor, E. (2008). Family values: Ownership structure, performance and capital structure of Canadian firms. *Journal of Banking & Finance*, 32(11), 2423-2432.
- Klapper, L., Laeven, L. and Rajan, R. (2006). Entry regulation as a barrier to entrepreneurship. *Journal of Financial Economics*, 82(3), 591-629.
- Klapper, L., Sarria-Allende, V. and Sulla, V. (2002). *Small-and medium-size enterprise financing in Eastern Europe* (Vol. 2933): World Bank Publications.
- Kouki, M. and Said, H. B. (2011). Capital structure determinants: new evidence from French panel data. *International journal of business and management*, 7(1), p214.
- Krasker, W. S. (1986). Stock price movements in response to stock issues under asymmetric information. *The Journal of Finance*, 41(1), 93-105.
- Kraus, A. and Litzenberger, R. H. (1973). A STATE-PREFERENCE MODEL OF OPTIMAL FINANCIAL LEVERAGE. *The Journal of Finance*, 28(4), 911-922.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. (1996). Law and finance. *NBER Working Paper*.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. (1997). Legal determinants of external finance. *Journal of Finance*, 52, 1131-1150.
- Lang, L., Ofek, E. and Stulz, R. (1996). Leverage, investment, and firm growth. *Journal of financial Economics*, 40(1), 3-29.
- Lasfer, M. A. (1995). Agency costs, taxes and debt: the UK evidence. *European Financial Management*, 1(3), 265-285.
- Leary, M. T. and Roberts, M. R. (2005). Do firms rebalance their capital structures? *The journal of finance*, 60(6), 2575-2619.
- Lemmon, M. L., Roberts, M. R. and Zender, J. F. (2008). Back to the beginning: persistence and the cross-section of corporate capital structure. *The Journal of Finance*, 63(4), 1575-1608.

- Lemmon, M. L. and Zender, J. F. (2002). Debt capacity and tests of capital structure theories.
- Lemmon, M. L. and Zender, J. F. (2008). Debt Capacity and Tests of Capital Structure Theories. *Working paper*.
- Lemmon, M. L. and Zender, J. F. (2010). Debt capacity and tests of capital structure theories.
- Lev, B. and Schwartz, A. (1971). On the use of the economic concept of human capital in financial statements. *Accounting Review*, 103-112.
- Lev, B. and Schwartz, A. (1972). On the use of the economic concept of human capital in financial statements: a reply. *Accounting Review*, 153-154.
- Li, K., Yue, H. and Zhao, L. (2009). Ownership, institutions, and capital structure: Evidence from China. *Journal of Comparative Economics*, 37(3), 471-490.
- Liebowitz, J. and Wright, K. (1999). A look toward valuating human capital. *Knowledge management handbook*, 849302382, 5.1-5.13.
- Liken, R. (1967). *The human organization: its management and value*: McGraw Hill, New York.
- Lim, T. C. (2012). Determinants of capital structure empirical evidence from financial services listed firms in China. *International journal of economics and finance*, 4(3), p191.
- Liu, L. X. (2006). *Do Firms Have Target Leverage Ratios?: Evidence from Historical Market-to-book and Past Returns*. University of Rochester. William E. Simon Graduate School of Business Administration.
- Long, M. S. and Malitz, I. B. (1985). Investment patterns and financial leverage *Corporate capital structures in the United States* (pp. 325-352): University of Chicago Press.
- Lööf, H. (2004). Dynamic optimal capital structure and technical change. *Structural Change and Economic Dynamics*, 15(4), 449-468.
- Luper, I. (2012). An Assessment of Risk Management of Small and Medium Scale Enterprises in Nigeria. *Research Journal of Finance and Accounting*, 3(5), 151-158.
- Mahajan, A. and Tartaroglu, S. (2008). Equity market timing and capital structure: International evidence. *Journal of Banking & Finance*, 32(5), 754-766.

- Mahmud, M. and Qayyum, A. (2003). The Relationship between Economic Growth and Capital Structure of Listed Companies: Evidence of Japan, Malaysia, and Pakistan [with Comments]. *The Pakistan Development Review*, 727-750.
- Main, B. G. and Reilly, B. (1993). The Employer Size-wage Gap: Evidence for Britain. *Economica*, 125-142.
- Maksimovic, V. and Titman, S. (1991). Financial policy and reputation for product quality. *Review of Financial Studies*, 4(1), 175-200.
- Marsh, P. (1982). The choice between equity and debt: An empirical study. *The Journal of finance*, 37(1), 121-144.
- Marshall, A. and Guillebaud, C. (1961). *Principles of Economics. 9th (variorum) ed*: Macmillan.
- Martin, R. E. (1988). Franchising and risk management. *The American Economic Review*, 954-968.
- Masnoon, M. and Saeed, A. (2014). Capital Structure Determinants of KSE Listed Automobile Companies. *European Scientific Journal*, 10(13).
- Masulis, R. W. (1983). The impact of capital structure change on firm value: Some estimates. *The Journal of Finance*, 38(1), 107-126.
- Mateev, M., Poutziouris, P. and Ivanov, K. (2013). On the determinants of SME capital structure in Central and Eastern Europe: A dynamic panel analysis. *Research in International Business and Finance*, 27(1), 28-51.
- Matsa, D. A. (2010). Capital structure as a strategic variable: Evidence from collective bargaining. *The Journal of Finance*, 65(3), 1197-1232.
- Maury, B. (2006). Family ownership and firm performance: Empirical evidence from Western European corporations. *Journal of Corporate Finance*, 12(2), 321-341.
- Mazur, K. (2007). The determinants of capital structure choice: evidence from Polish companies. *International Advances in Economic Research*, 13(4), 495-514.
- McConnell, J. J. and Servaes, H. (1995). Equity ownership and the two faces of debt. *Journal of Financial Economics*, 39(1), 131-157.
- Michaelas, N., Chittenden, F. and Poutziouris, P. (1999). Financial policy and capital structure choice in UK SMEs: Empirical evidence from company panel data. *Small business economics*, 12(2), 113-130.

- Miller, M. H. and Modigliani, F. (1961). Dividend policy, growth, and the valuation of shares. *the Journal of Business*, 34(4), 411-433.
- Miller, M. H. and Rock, K. (1985). Dividend policy under asymmetric information. *The Journal of Finance*, 40(4), 1031-1051.
- Mincer, J. (1958). Investment in human capital and personal income distribution. *The journal of political economy*, 281-302.
- Modigliani, F. and Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American economic review*, 261-297.
- Modigliani, F. and Miller, M. H. (1963). Corporate income taxes and the cost of capital: a correction. *The American Economic Review*, 433-443.
- Moore, W. T. (1986). ASSET COMPOSITION, BANKRUPTCY COSTS, AND THE FIRMS CHOICE OF CAPITAL STRUCTURE. *Quarterly Review of Economics and Business*, 26(4), 51-61.
- Morissette, R. (1993). Canadian Jobs and Firm Size: Do Smaller Firms Pay Less? *Canadian Journal of Economics*, 159-174.
- Mouamer, F. M. A. (2011). The determinants of capital structure of Palestine-listed companies. *Journal of Risk Finance*, 12(3), 226-241.
- Muradođlu, Y. G. and Sivaprasad, S. (2012). Capital structure and abnormal returns. *International Business Review*, 21(3), 328-341.
- Myers, S. C. (1977). Determinants of corporate borrowing. *Journal of financial economics*, 5(2), 147-175.
- Myers, S. C. (1984). The capital structure puzzle. *The journal of finance*, 39(3), 574-592.
- Myers, S. C. (2001). Capital structure. *Journal of Economic perspectives*, 81-102.
- 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), 187-221.
- Myers, S. C. and Rajan, R. G. (1998). The Paradox of Liquidity. *The Quarterly Journal of Economics*, 113(3), 733-771.
- N Berger, A. and F Udell, G. (1998). The economics of small business finance: The roles of private equity and debt markets in the financial growth cycle. *Journal of Banking & Finance*, 22(6), 613-673.

- Nadaraja, P., Zulkafli, A. H. and Masron, T. A. (2011). Family Ownership, Firm's Financial Characteristics and Capital Structure: Evidence from Public Listed Companies in Malaysia. *Economia. Seria Management*, 14(1), 141-156.
- Nagano, M. (2003). Inter-Regional and Intra-Regional Trade in East Asia: Recent Developments and Aggregate Bilateral Trade Elasticities. *Journal of Economic Integration*, 18(1), 105-125.
- Narayanan, M. (1988). Debt versus equity under asymmetric information. *Journal of Financial and Quantitative Analysis*, 23(01), 39-51.
- Newman, A., Gunessee, S. and Hilton, B. (2011). Applicability of financial theories of capital structure to the Chinese cultural context: A study of privately owned SMEs. *International Small Business Journal*, 0266242610370977.
- Newman, A., Gunessee, S. and Hilton, B. (2012). Applicability of financial theories of capital structure to the Chinese cultural context: A study of privately owned SMEs. *International Small Business Journal*, 30(1), 65-83.
- Nguyen, D. T., Diaz-Rainey, I. and Gregoriou, A. (2012). Financial development and the determinants of capital structure in Vietnam. *Available at SSRN 2014834*.
- Nguyen, T. D. K. and Ramachandran, N. (2006). Capital structure in small and medium-sized enterprises: the case of Vietnam. *ASEAN Economic bulletin*, 23(2), 192-211.
- Niresh, J. A. and Velnampy, T. (2012). The relationship between capital structure and profitability. *Global Journal of Management and Business Research*, 12(13).
- Nivorozhkin, E. (2004). The dynamics of capital structure in transition economies. *Economics of Planning*, 37(1), 25-45.
- Noe, T. H. (1988). Capital structure and signaling game equilibria. *Review of Financial Studies*, 1(4), 331-355.
- Ogden, J. P., Jen, F. C. and O'Connor, P. F. (2003). *Advanced Corporate Finance: Policies & Strategies*. Englewood Cliffs, NJ: Prentice-Hall.
- Omet, G. and Mashharawe, F. (2002). The capital structure choice in tax contrasting environments: evidence from the Jordanian, Kuwaiti, Omani and Saudi corporate sectors. Proceedings of the 2002 *The Economic Research Form 10* Annual Conference, December (Marrakesh, Morocco)*,

- Omet, G. and Nobanee, H. (2001). The capital structure of listed industrial companies in Jordan. *Arabic Journal of Administrative Sciences*, 8, 273-289.
- Omet, G. S. (2008). The capital structure in stable and extremely unstable political and economic environments. Proceedings of the 2008 *Second Singapore International Conference on Finance*,
- Ooi, J. (1999). The determinants of capital structure evidence on UK property companies. *Journal of Property Investment & Finance*, 17(5), 464-480.
- Örtqvist, D., Masli, E. K., Rahman, S. F. and Selvarajah, C. (2006). Determinants of capital structure in new ventures: Evidence from Swedish longitudinal data. *Journal of Developmental entrepreneurship*, 11(04), 277-296.
- OWOLABI, S. A. and INYANG, U. E. (2012). Determinants Of Capital Structure In Nigerian Firms: A Theoretical Review. *Ecanadian Journal Of Accounting And Finance*, 1(1), 7-15.
- Ozkan, A. (1996). Corporate bankruptcies, liquidation costs and the role of banks. *The Manchester School*, 64(S1), 104-118.
- Ozkan, A. (2001). Determinants of capital structure and adjustment to long run target: evidence from UK company panel data. *Journal of Business Finance & Accounting*, 28(1-2), 175-198.
- Pandey, I. M. (1999). *Financial Management*. New Delhi, India: Vikas Publishing House.
- Pandey, I. M. (2001). Capital structure and the firm characteristics: evidence from an emerging market. *Indian Institute of Management Ahmedabad Working Paper*, (2001-10), 04.
- Parsons, C. and Titman, S. (2009). *Empirical capital structure: A review*: Now Publishers Inc.
- Paudel, R. B. (1994). *Industrial Finance in Nepal*. PhD Thesis, Faculty of Management, TU.
- Paul, S., Whittam, G. and Wyper, J. (2007). The pecking order hypothesis: does it apply to start-up firms? *Journal of Small Business and Enterprise Development*, 14(1), 8-21.
- Pervez, A. (2011). Pakistan Power Sector: Consulate General of Switzerland in Karachi.

- Petersen, M. A. and Rajan, R. G. (1994). The benefits of lending relationships: Evidence from small business data. *The journal of Finance*, 49(1), 3-37.
- Pratt, R. (2011). *A Structural Model of Human Capital and Leverage*. Duke University
- Prowse, S. D. (1990). Institutional investment patterns and corporate financial behavior in the United States and Japan. *Journal of Financial Economics*, 27(1), 43-66.
- Qayyum, S. (2013). Determinants of capital structure: An empirical study of Cement industry of Pakistan. *Interdisciplinary Journal Of Contemporary Research In Business*, 4(11), 784-795.
- Qian, Y., Tian, Y. and Wirjanto, T. S. (2009). Do Chinese publicly listed companies adjust their capital structure toward a target level? *China Economic Review*, 20(4), 662-676.
- Qureshi, M. A. (2009). Does pecking order theory explain leverage behaviour in Pakistan? *Applied Financial Economics*, 19(17), 1365-1370.
- Qureshi, M. A. and Azid, T. (2006). Did they do it differently? Capital structure choices of public and private sectors in Pakistan. *The Pakistan Development Review*, 701-709.
- Rafiq, M., Iqbal, A. and Atiq, M. (2008). The determinants of capital structure of the chemical industry in Pakistan. *The Lahore Journal of Economics*, 13(1), 139-158.
- Rafique, M. (2011). Effect of Profitability & Financial Leverage on Capital Structure: A Case of Pakistan's Automobile Industry. *Economics and Finance Review*, 1(4), 50-58.
- Rajan, R. G. and Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. *The journal of Finance*, 50(5), 1421-1460.
- Rajan, R. G. and Zingales, L. (1998). Which capitalism? Lessons from the east Asian crisis. *Journal of Applied Corporate Finance*, 11(3), 40-48.
- Ramakrishnan, S. (2012). *Sectoral analysis on capital structure determinants among the Malaysia listed firms*. Deakin University.
- Ramlall, I. (2009). Determinants of capital structure among non-quoted Mauritian firms under specificity of leverage: looking for a modified pecking order

- theory. *International research journal of finance and economics*, 31(31), 83-92.
- Reid, G. C. (1996). Financial structure and the growing small firm: theoretical underpinning and current evidence. *Small Business Economics*, 8(1), 1-7.
- Remmers, L., Stonehill, A., Wright, R. and Beekhuisen, T. (1974). Industry and Size as Debt Ratio Determinants in Manufacturing Internationally. *Financial Management (Summer)*, 24-32.
- Robert, W. H. and Lloyd Hunter, R. (1995). Determinants of capital structure in the retailing sector in the UK.
- Robichek, A. A. and Myers, S. C. (1966). Problems in the theory of optimal capital structure. *Journal of Financial and Quantitative Analysis*, 1(02), 1-35.
- Roden, D. M. and Lewellen, W. G. (1995). Corporate capital structure decisions: evidence from leveraged buyouts. *Financial Management*, 76-87.
- Roodman, D. (2009). How to do xtabond2: An introduction to difference and system GMM in Stata. *Stata Journal*, 9(1), 86.
- Roos, J. (1998). Exploring the concept of intellectual capital (IC). *Long Range Planning*, 31(1), 150-153.
- Roslender, R. and Dyson, J. (1992). Accounting for the worth of employees: a new look at an old problem. *The British Accounting Review*, 24(4), 311-329.
- Ross, S. A. (1977). The determination of financial structure: the incentive-signalling approach. *The Bell Journal of Economics*, 23-40.
- Rousseau, P. L. and Xiao, S. (2008). Change of control and the success of China's share-issue privatization. *China Economic Review*, 19(4), 605-613.
- Rozeff, M. S. (1982). Growth, beta and agency costs as determinants of dividend payout ratios. *Journal of financial Research*, 5(3), 249-259.
- Sabir, M. and Malik, Q. A. (2012). Determinants of Capital Structure: A study of oil and gas sector of Pakistan'. *Interdisciplinary Journal of Contemporary Research in Business*, 3(10), 395-400.
- Saleem, M. (2007). Benchmarking and Regulation for the Electricity Distribution Sector in Pakistan Lessons for Developing Countries. *South Asia Economic Journal*, 8(1), 117-138.

- San, O. T. and Heng, T. B. (2011). Capital structure and corporate performance of Malaysian construction sector. *International Journal of Humanities and Social Science*, 1(2), 28-36.
- Sander, P. (1998). Kapitali struktuuri valik ja laenukapitali maksueelis. *Eesti mittefinantssektori ettevõtete baasil. TÜ rahanduse ja arvestuse instituut*, 137.
- Sander, P. (2003). Capital structure choice in Estonian companies: A survey. *Management of Organizations: Systematic Research*, 27, 122-135.
- Šarlija, N. and Harc, M. (2012). The impact of liquidity on the capital structure: a case study of Croatian firms. *Business Systems Research*, 3(1), 30-36.
- Schmidt, C. M. and Zimmermann, K. F. (1991). Work Characteristics, Firm Size and Wages. *The Review of Economics and Statistics*, 705-710.
- Schultz, T. W. (1961). Investment in human capital. *The American economic review*, 1-17.
- Schwartz, E. and Aronson, J. R. (1967). SOME SURROGATE EVIDENCE IN SUPPORT OF THE CONCEPT OF OPTIMAL FINANCIAL STRUCTURE*. *The Journal of Finance*, 22(1), 10-18.
- Scott, J. H. (1977). Bankruptcy, secured debt, and optimal capital structure. *The Journal of Finance*, 32(1), 1-19.
- Scott Jr, J. H. (1976). A theory of optimal capital structure. *The Bell Journal of Economics*, 33-54.
- Seppa, R. (2008). Capital structure decisions: research in Estonian non-financial companies. *Baltic Journal of Management*, 3(1), 55-70.
- Shah, A. and Khan, S. (2007). Determinants of capital structure: Evidence from Pakistani panel data. *International review of business research papers*, 3(4), 265-282.
- Shahjahanpour, A., Ghalambor, H. and Aflatooni, A. (2010). The Determinants of Capital Structure Choice in the Iranian Companies. *International Research Journal of Finance and Economics*, (56), 167-178.
- Sharma, J. L. (1983). Efficient capital markets and random character of stock price behavior in a developing economy. *Indian Journal of Economics*, 63(251), 395.

- Sheikh, N. A. and Wang, Z. (2011). Determinants of capital structure: an empirical study of firms in manufacturing industry of Pakistan. *Managerial Finance*, 37(2), 117-133.
- Shyam-Sunder, L. and C Myers, S. (1999). Testing static tradeoff against pecking order models of capital structure. *Journal of financial economics*, 51(2), 219-244.
- Sibilkov, V. (2009). Asset liquidity and capital structure. *Journal of Financial and Quantitative Analysis*, 44(05), 1173-1196.
- Smith Jr, C. W. and Watts, R. L. (1992). The investment opportunity set and corporate financing, dividend, and compensation policies. *Journal of financial Economics*, 32(3), 263-292.
- Sogorb-Mira, F. (2005). How SME uniqueness affects capital structure: Evidence from a 1994–1998 Spanish data panel. *Small business economics*, 25(5), 447-457.
- Song, H.-S. (2005). Capital Structure Determinants An Empirical Study of Swedish Companies.
- Sporleder, T. L. and Moss, L. (2004). Knowledge Capital, Intangible Assets, and Leverage: Evidence from US Agricultural Biotechnology Firms. *International Food and Agribusiness Management Review*, 7(2), 26-36.
- Storey, D. J. (1994). The role of legal status in influencing bank financing and new firm growth. *applied economics*, 26(2), 129-136.
- Stulz, R. (1990). Managerial discretion and optimal financing policies. *Journal of financial Economics*, 26(1), 3-27.
- Supanvanij, J. (2006). Capital structure: Asian firms vs. multinational firms in Asia. *Journal of American Academy of Business*, 10(1), 324-330.
- Taggart Jr, R. A. (1985). Effects of regulation on utility financing: Theory and evidence: National Bureau of Economic Research.
- Teker, D., Tasseven, O. and Tukul, A. (2009). Determinants of capital structure for Turkish firms: A panel data analysis. *International Research Journal of Finance and Economics*, 29, 179-187.
- Thies, C. F. and Klock, M. S. (1992). Determinants of capital structure. *Review of Financial Economics*, 1(2), 40-52.

- Thompson, G. D. (1998). Cultural capital and accounting. *Accounting, Auditing and Accountability Journal*, 12(4), 394-412.
- Ting, I. W. K. and Lean, H. H. (2009). Intellectual capital performance of financial institutions in Malaysia. *Journal of Intellectual capital*, 10(4), 588-599.
- Titman, S. (1984). The effect of capital structure on a firm's liquidation decision. *Journal of Financial Economics*, 13(1), 137-151.
- Titman, S. and Wessels, R. (1988). The determinants of capital structure choice. *The Journal of finance*, 43(1), 1-19.
- Tong, G. and Green, C. J. (2005). Pecking order or trade-off hypothesis? Evidence on the capital structure of Chinese companies. *Applied Economics*, 37(19), 2179-2189.
- Tucker, J. and Stoja, E. (2011). Industry membership and capital structure dynamics in the UK. *International Review of Financial Analysis*, 20(4), 207-214.
- Ullah, W. and Nishat, M. (2008). Capital structure choice in an emerging market: evidence from listed firms in Pakistan. Proceedings of the 2008 *21st Australasian Finance and Banking Conference*,
- Umar, M., Tanveer, Z., Aslam, S. and Sajid, M. (2012). Impact of Capital Structure on Firms' Financial Performance: Evidence from Pakistan. *Research Journal of Finance and Accounting*, 3(9), 1-12.
- Van der Wijst, N. and Thurik, R. (1993). Determinants of small firm debt ratios: An analysis of retail panel data. *Small Business Economics*, 5(1), 55-65.
- Vanacker, T. R. and Manigart, S. (2010). Pecking order and debt capacity considerations for high-growth companies seeking financing. *Small Business Economics*, 35(1), 53-69.
- Vasiliou, D., Eriotis, N. and Daskalakis, N. (2009). Testing the pecking order theory: the importance of methodology. *Qualitative Research in Financial Markets*, 1(2), 85-96.
- Vilasuso, J. and Minkler, A. (2001). Agency costs, asset specificity, and the capital structure of the firm. *Journal of Economic Behavior & Organization*, 44(1), 55-69.
- Viswanath, P. (1993). Strategic considerations, the pecking order hypothesis, and market reactions to equity financing. *Journal of Financial and Quantitative Analysis*, 28(02), 213-234.

- Viviani, J.-L. (2008). Capital structure determinants: an empirical study of French companies in the wine industry. *International Journal of Wine Business Research*, 20(2), 171-194.
- Wald, J. K. (1999). How firm characteristics affect capital structure: an international comparison. *Journal of Financial research*, 22(2), 161-187.
- Watson, R. and Wilson, N. (2002). Small and medium size enterprise financing: A note on some of the empirical implications of a pecking order. *Journal of Business Finance & Accounting*, 29(3-4), 557-578.
- Welch, I. (2004). Capital structure and stock returns. *Journal of Political Economy*, 112(1), 106-132.
- Welch, I. (2011). Two Common Problems in Capital Structure Research: The Financial-Debt-To-Asset Ratio and Issuing Activity Versus Leverage Changes. *International Review of Finance*, 11(1), 1-17.
- Williamson, O. E. (1988). Corporate Finance and Corporate Governance. *The Journal of Finance*, 43(3), 567-591.
- Windmeijer, F. (2005). A Finite Sample Correction for the Variance of Linear Efficient two-step GMM Estimators. *Journal of Econometrics*, 126(1), 25-51.
- Winter-Ebmer, R. (2001). Evaluating an Innovative Redundancy-retraining Project: The Austrian Steel Foundation.
- Winter-Ebmer, R. and Zweimüller, J. (1999). Firm-size Wage Differentials in Switzerland: Evidence from Job-changers. *American Economic Review*, 89-93.
- Wiwattanakantang, Y. (1999). An Empirical Study on the Determinants of the Capital Structure of Thai Firms. *Pacific-Basin Finance Journal*, 7(3), 371-403.
- Wurgler, J. (2000). Financial Markets and the Allocation of Capital. *Journal of Financial Economics*, 58(1), 187-214.
- Yang, C.-C., Lee, C.-f., Gu, Y.-X. and Lee, Y.-W. (2010). Co-determination of Capital Structure and Stock Returns—A LISREL Approach: An Empirical Test of Taiwan Stock Markets. *The Quarterly Review of Economics and Finance*, 50(2), 222-233.
- Zikmund, W. G. (1997). Business Research Methods. *Forth Worth, TX, Harcourt Brace Publishers*.

- Zingales, L. (2000). In Search of New Foundations. *The Journal of Finance*, 55(4), 1623-1653.
- Zurigat, Z. (2009). *Pecking Order Theory, Trade-off Theory and Determinants of Capital Structure: Empirical Evidence from Jordan*. Heriot-Watt University.