External Factors and Capital Structure

ZIA UR REHMAN
Assistant Professor, Department of Management Sciences
University of Haripur
zia.rehman@uoh.edu.pk

SHER ALI KHAN
PhD Scholar, Durham Business School
Durham University, United Kingdom
sher.a.khan@durham.ac.uk

ASAD KHAN
Lecturer, Department of Management Sciences
University of Haripur
asadkhan@uoh.edu.pk

Abstract
Financing decisions and its effect on firm value continues to attract the attention of the researchers and have explore several internal and external factors that influence the financing decisions of the firm and how it affects firm value. The aim of the study is to examine the effect of external factors on the financing decisions of the listed non-financial firms of Pakistan; the empirical findings of the study reveal that external factors do influence the financial decisions of the firm. GDP growth rate, corporate taxes, banking sector development and development of stock markets significantly influences the financing decisions of the firms. On the other hand we find weak relationship between corruption, real interest rate and leverage. Moreover, the relationship between GDP growth rate, corporate taxes, development of stock markets, banking sector development, real interest rate and leverage is positive whereas in case of corruption it is negative.

Keywords: *GDP Growth Rate, Real Interest Rates, Corporate Taxes, Corruption, Stock Market Development, Leverage*

1. Introduction

Financing decisions and its effect on firm value has long been the focus of discussion among prominent researchers. Researchers have attempted to explore the factors that influence the financing decisions of the firm and how it affects firm value. In this process a number of factors have been identified that could influence financing decisions. However, the level of impact and the direction of their influence vary across industries as well as countries. Factors influencing capital structure decisions are categorised into two broad categories i.e. internal factors (firm specific) and external factors (country specific). Internal factors can be controlled by the management but external factors cannot be controlled by the management. Therefore, it is important to understand how these external factors influence decision making process of the firm, in particular the financing decision.

A vast majority of empirical literature has focused on internal factors (see Barton & Gordon, 1988; Titman & Wessels, 1988; Korajczyk& Levy, 2003; Bauer, 2004; Daskalakis & Psillaki, 2008; Bokpin, 2009; Dincergok &Yalciner, 2011; Nguyen & Wu, 2011; Keshtkar, Valipour, & Javanmard, 2012; Kouki & Said, 2012). However, in the last decade or so we have witnessed more focus on the effect of external factors on the financing decisions of the firm. Among them Rajan and Zingales (1995) were most probably the first to highlight the significance of external factors with respect to its influence on firm financing decisions. Empirical studies from Rajan and Zingales (1995), Booth, Aivazian, Demirguc-Kunt and Maksmivoc (2001), Gajurel (2006), Fan, Titman and Twite, (2012) provides strong evidence that external factors do influence capital structure decisions.

In literature, we find a number of theories that help us in explaining the firm's behaviour with respect to their preferred choice of financing. Trade-off theory, pecking order theory and market timing theory are widely used in empirical studies by researchers. Trade-off theory originating of the Modigliani and Miller (1958) irrelevance proposition assumes a firm can achieve optimal capital structure if it balances between the cost of debt and the benefit of debt. The associated cost of debt includes agency costs and bankruptcy costs whereas the benefit of debt includes tax shield advantages. Pecking order theory introduced by Myers and Majluf (1984) assumes that there is a hierarchical order that firms follow while making their financing decisions. Internal funds are preferred over external funds and an external debt gets a preference over the costly external equity. Lastly, market timing theory introduced by Baker and Wurgler (2002) assumes that firms choose appropriate timing for their issues particularly equity issues. New stock will be offered for sale by the firm when the firm considers that the market value of their stock is overvalued and repurchase its stock when the firm considers that its stock priced is undervalued. These theories of capital structure along with many other theories of capital structure provide meaningful insights as far as the nature of corporate culture is concerned. Moreover, these theories are also helpful in identifying possible variables both internal and external that may influence capital structure decisions by the firm. While reviewing the literature, we found that most of the studies have focused on developed countries while analysing the effect of external environment on the financing decisions of the firms whereas the effect in developing countries has been somewhat under researched. There is greater need to focus on developing countries to find out how variables of external environment influences financing decisions because the external environment in developed economies is entirely different than that of developing economies where the financial markets are not as developed and stable as in developed economies. Moreover, corruption an important external environment variable is a more serious problem for developing countries due to inefficient legal system as compared to developed countries where legal system is much more efficient and corruption is kept under check.

Since Pakistan is a developing country, therefore, the aim of the paper is to investigate how the external environment influences the financing decisions of listed Pakistani firms. The management of the firm cannot control the external environment and changes in external environment variables such as GDP growth rate, real interest rate, taxes, corruption and development of financial system may affect the firms positively as well as negatively. Moreover, the economy of Pakistan is going through challenging times with energy crisis, poor law and order on one hand and corruption, inefficient legal system and underdeveloped financial system on the other. In the

backdrop of these challenging economic conditions it is important to analyse how these external factors are influencing the financing decision of the firm.

2. Literature Review

The prevailing economic environment of a country particularly in developing countries plays an important role in the financing decision of the firm. It is widely agreed that the availability of funds for external financing is limited in developing countries as compared to developed countries. Hence, decision with respect to monetary policy and fiscal policy by the government directly influences the economic environment and consequently the financing decision of the firm. With fiscal policy the government aims to maintain price stability and ensure economic growth by influencing the aggregate demand in an economy whereas the aim of the monetary policy is to stabilize the economy by controlling money supply and adjusting interest rates. Therefore, monetary policy influences inflation rates and interest rates whereas fiscal policy influences tax rates. For instance, capital structure decisions are directly affected by changes in tax rates due to tax shield advantages (Modigliani & Miller, 1963; Miller 1977). Furthermore, since monetary policy is used to determine interest rates, therefore, borrowing costs are directly influence by changes in interest rates. Studies from Hall, Hutchinson and Michaelas (2004), Gaud, Hoesli and Bender (2007) and Fan et al., (2012) emphasized on the importance of external factors and concluded in their respective studies that external factors have significant influences on the capital structure decisions of the firm. They further elaborated that even the influence of firm level determinants vary across countries which further endorses the argument that external factors are critical as far as the financing decision of the firm is concerned.

GDP growth rate is one of the most common determinants that are used in empirical studies with respect to its influence on financing decision of the firm. Studies from Booth et al., (2001), Korajaczyk and Levy (2003), Dasklalakis and Psillakis (2008), Baltaci and Ayaydin (2014) etc. while finding support for Trade-off theory concluded that GDP growth rate and leverage are positively related. At the same time, studies from Bopkin, (2009), Dincergok and Yalciner, (2011),Camara, (2012), Koksal and Orman (2014) etc. revealed aninverse relationship between GDP growth rate and leverage. The findings of their studies support the pecking order hypothesis of preference for internal funds over external funds because during periods of economic growth, the profitability of the firm is expected to rise thus enabling funds to use their internal funds first and then external funds provided the internally generated funds are not sufficient enough to meet the financing needs of the firm. Another important variable that is used in empirical studies is interest rates. Borrowing rates are directly influenced by changes in interest rates. Rise in interest rates, on one hand, discourages firm to borrow due to increased cost of financial distress but at the same time encourages firm to borrow as there will be more tax shield advantages to exploit for the firm. Studies from Graham and Harvey (2001), Bancel and Mittoo (2004), Henderson Jedadesh and Weisbach (2006) and Bartholdy and Mateus (2008) revealed that interest rates and leverage are negatively related. On the contrary, Bopkin (2009) found positive relationship between interest rates and leverage. Since interest is treated as an expense, therefore, debt financing offers the firms certain tax savings that can be achieved if the firm increases the proportion of debt in the total mix of financing. Studies from Graham (2000), Bauer, (2004), Moore and Ruane (2005) and Huizinga, Laeven and Nicodeme (2008) reveals that corporate taxes positively influences leverage. Moreover, Ayers, Cloyd and Robinson (2001) found negative

effect of corporate taxes on leverage whereas Titman and Wessels (1988) found no significant influence on leverage with respect to corporate taxes. Although a vast majority of empirical studies have focussed on firm level determinants, yet in country specific studies also we find limited studies (Demirguc-Kunt&Maksimovic, 1999; Fan et al., 2011) that focussed on the impact factors like corruption and legal system on the financing choices of the firm. The overall objective of the firm is to minimize the cost of financingregardless of the fact whether the firm is in developed country or developing country. However, the environments in which these firms operate vary significantly from country to country. The level of development and efficiency of financial environment not only affects the availability of external funds but also the financing decision of the firm.

Corruption also an important external factor significantly influences firm decision making. Corruption basically means misuse of public office for private gain. The cost of borrowing increases as a result of corruption both for government and for firm (Ciocchini, Durbin & Ng, 2003). Corruption weakens the legal and regulatory environment of the country; therefore, in order to provide funds for firms in corrupt countries, investors demand a greater return on debt. Moreover, corruption can also lead to the creation of agency problems as managers may take bribes while undertaking projects rather than evaluating the potential economic benefits that the project can provide to the firm. Poor legal system and enforcement of laws makes it difficult to prevent such practices on part of the managers. Firms as well as government may take steps to discourage or make it difficult to take bribes but all measures not only results in wastage of resources but also increases the transaction cost within the economy.

Hence, cost of borrowing will be high in an economy where corruption is high and vice versa. Lee and Ng (2009) while finding negative relationship between corruption and leverage argued that shareholder value can deteriorate significantly as a result of corruption. At the same time studies from Leff, (1964), Lui, (1985), Kaufmann and Wei, (1999) found positive relationship between corruption and leverage. Although these results are quite surprising and may be contrary to our expectations but they do support the concept of efficient grease hypothesis. According to this hypothesis, firms will have access to cheaper funds which will lower the cost of capital if they pay more bribes (Kaufmann & Wei, 1999). By paying bribes, firms may save time that normally officials will take to certify compliance with rules and regulations. At the same time, some corruption may be desirable because officials may become more helpful if they are paid well through bribes (Leff, 1964). Moreover, corruption also enables firms to overcome regulations that are considered to be troublesome. The role of financial institutions is of critical importance in mobilizing funds from savers to lenders. A well-developed financial system not only reduces the cost of financing but also provides increased access to finance to firms as well as liquidity. Banks an important financial institution play an important role while monitoring borrowers. Since banks has an advantage in gaining information efficiently, therefore, they are not only in a better position but are also most likely to use this information to discipline borrowers (Diamond, 1984). Hence, external financing becomes easier where banking sector is developed. Another important financial institution is the stock market and most of the empirical studies have focussed on analysing the effects of stock market development on the financing decisions of the firm (Rajan & Zingales, 1995; Levine & Zervos, 1998; Demirguc-Kunt & Maksimovic, 1999).Development of stock market is significant for the reason that it improves

monitoring, information quality and corporate control. Empirically, studies from Gajurel (2006) and Dincergok and Yalciner (2011) found positive relationship between development of stock market and leverage whereas Sett and Sarkhel (2010) finds inverse relationship between these two variables. At the same time, Bopkin (2009) finds no relationship between these variables.

3. Data and Methodology

Since the objective of the study is to analyse the effect of external factors on the capital structure decisions of the firm, therefore, secondary data is used for this purpose. Data was collected from the World Bank database and database of State Bank of Pakistan for the period of 2006-2015. The sample comprised of all listed non-financial firms of PSX. Only those firms were selected that remained listed for the entire ten year duration and also complete financial data was available for them. The final sample comprised of 334 firms. The dependent variable used in this study is leverage (LEV). External variables used in this study are GDP growth rate (GDPR), real interest rate(RIR), corruption (CI), corporate taxes (TAX), stock market development(SMR), banking sector development (BA). Leverage ismeasured as debt divided by equity *100, real interest rate is measured through nominal interest rate minus inflation (inflation is measured through GDP deflator), corruption (CI) is measured through the annual corruption index (Transparency International) and GDP growth rate is measured through annual growth rate of the economy. Stock market development is measured through stock turnover ratio i.e. total value of shares in the period divided by the average market capitalization for the period. For measuring banking sector development, total banking assets as percentage of GDP is used.

3.1 Estimated Model

In order to analyse the effect of external environment on financing decisions, panel data regression is used. As compared to other methods, panel data offers a number of advantages including more variability, efficiency and data is more informative with more degrees of freedom and less collinerarity among independent variables. Panel data is more useful particularly in financial studies involving annualize data like ours as it offers large number of data points (Hiaso, 1986).Furthermore, panel data helps in measuring those effects also that a pure time series model or pure cross section model fail to detect (Baltagi, 1995). The model used to analyse the effect of external environment on leverage is given below:

$$LEV_{it} = \alpha_0 + \beta_1 GDPR_{it} + \beta_2 BA_{it} + \beta_3 SMR_{it} + \beta_4 TAX_{it} + \beta_5 RIR_{it} + \beta_6 CI_{it} + \mu_{it}$$

Panel data consists of two common models i.e. random effects model and fixed effects model that are constantly used by researchers in empirical studies.Random model assumes that each firm's intercept is a random drawing with constant mean value from a population that is quite large whereas the fixed effect model assumes that the intercept of each firm is different.Where a panel is balance like in our case, fixed effects is appropriate whereas random effects is appropriate where a sample consists of limited observations of the existing cross-sectional units. (Gujarati, 2004). Although, fixed effects seems to be appropriate, however, to eliminate selection bias between random effects model and fixed effects model, Hausman test was used. Hausman test (1978) is a specification test that assesses an estimator's consistency when compared with an already known estimator that is less efficient but consistent. Hausman test helps us in determining whether random effects model is more

appropriate or fixed effects model. The results of Hausman test indicate that fixed effects model is more appropriate in this study.

Table 1: Hausman Test

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	52.54	6	0.00

Before running regression there are several factors that must be considered. They include multicollinearity and heteroskedasticity. When two or more independent variables in a given regression equation are moderately or highly correlated with each other, it means the presence of multicollinearity between independent variables. The presence of multicollinearity leads to insignificant t-values, high R-square and large variances and covariances which make it difficult to precisely estimate the relationship between independent variables and dependent variables. If the value of VIF is more than 10 then multicollinearity is an issue (Gujarati, 2004). In table 2 and 3 correlation matrix and variance inflation factors of the variables are given respectively. Since the value of VIF is less than 10 therefore, multicollinearity is not an issue in this study.

Table 2: Correlation Matrix

	LEV	TAX	GDPR	RIR	SMR	BA	CI
LEV	1.000						
TAX	0.191	1.000					
GDPR	0.276	-0.093	1.000				
RIR	0.035	0.002	0.072	1.000			
SMR	0.311	-0.051	0.680	-0.239	1.000		
BA	0.171	0.041	-0.321	0.417	-0.260	1.000	
CI	-0.261	0.052	-0.382	0.395	-0.775	0.501	1.000

Table 3: Variance Inflation Factors

Variable	*VIF*
TAX	1.125
BA	2.257
CI	5.585
GDPR	4.344
SMR	9.314
RIR	1.815

Another important assumption of the regression model is the equality of variances of the error term across all observations. If the variances of the error term are not equal then it means that variable data is heteroscedastic. In the presence of heteroscdeasticity, the results derived, particularly the tests of significance cannot be

validated. Therefore, to identify and overcome issues related to heteroscdasticity, white cross section test along estimated generalized least squares was used to estimate the model where each observation of a firm constituted a cross section.

4. Results

Table 4: Descriptive Statistics

	LEV	TAX	BA	CI	GDPR	SMR	RIR
Mean	5.40	4.73	45.89	24.00	4.51	140.20	0.18
Median	5.06	3.63	45.95	24.00	4.40	99.19	0.90
Maximum	12.49	10.55	51.23	28.00	7.70	307.69	7.90
Minimum	-5.28	-4.61	42.10	21.00	1.60	29.59	-8.10
Std. Dev.	1.61	2.78	2.75	2.24	2.16	114.29	4.99
Skewness	1.14	0.19	0.42	0.27	0.08	0.43	-0.27
Kurtosis	6.22	2.42	2.38	2.07	1.57	1.49	1.87
Jarque-Bera	2173.00	68.68	153.38	159.93	288.47	422.80	219.11
Probability	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Observations	3340	3340	3340	3340	3340	3340	3340

Table 4 presents the descriptive statistics of the variables. Closeness between the mean and median values indicates the evenness of data. The skewness values indicate that variable data is more or less normally distributed. Standard deviation measures the volatility of data and values standard deviation indicates that data is volatile.

Table 5: Panel Regression Analysis

Variable	*Coefficient*	*Std. Error*	*t-Statistic*	*Prob.*
C	7.508	0.723	10.387	0.000
TAX	0.018	0.007	2.471	0.014
BA	0.027	0.022	2.156	0.031
CI	-0.027	0.026	-1.021	0.307
GDPR	0.052	0.020	2.585	0.010
SMR	0.003	0.001	4.727	0.000
RIR	0.017	0.015	1.143	0.253
R-squared	0.709	*F-statistic*		21.572
S.E. of regression	1.142	*Prob(F-statistic)*		0.000

From the results derived in the above table we can clearly see that corporate tax, banking sector development, GDP growth rate and stock market development significantly influences financing decisions of listed non-financial firms of Pakistan. Moreover, the relationship between corporate tax, real interest rate, GDP growth rate, banking sector development and stock market development is positive whereas in case of corruption it is negative. The development of financial markets plays a vital role in the development of overall economy as well as meeting the financial needs of the organization. The development of financial markets comprises of development of stock market and development of bank sector. The development of stock markets and banking sector not only improves access to finance but also results in lower costs.

Moreover, stock markets in particular, play an important role in the monitoring and control of the firm and also improve the information quality which not only enable firm to borrow easily from the financial markets but also allow lenders to extend loans to creditworthy firms. Studies from Demirguc-Kunt and Maksimovic (1996), Gajurel (2006) and Dincergok and Yalciner (2011) providestrong evidence that leverage ratios tend to rise as financial markets develop. Pakistan is a developing economy and the financial markets are in the developing stageand the positive relationship between stock market development, banking sector developmentand leverage indicates that firms are inclined to use financial markets to raise funds in order to meet their financial needs.

Positive relationship between GDP growth rate and leverage indicates that leverage ratios tend to rise for firms in periods of rising growth rates and declines in during recession. During periods economic growth investment opportunities tend to rise thus encouraging firms to borrow to exploit these profitable investment opportunities (Yeh& Roca, 2010). Additionally, the internally generated funds for most of the firms may not be sufficient enough to exploit these profitable opportunities thus encouraging such firms to borrow from external sources. Negative relationship between corruption and leverage indicates that rise in corruption leads to decline in leverage ratios. Rise in corruption leads to wastage of resources and increases the cost of borrowing as result of increase in transaction costs. Lee and Ng (2009) also found an inverse relationship between corruption and leverage and concluded that corruption significantly affects shareholder value. Positive relationship between corporate tax and leverage further strengthens the notion that in the presence of tax shields advantages firms will prefer to use more debt. Tax savings tend to rise as interest rates increase thus encouraging firms to borrow.De Jong et al. (2008) and Sayeed (2011) also found significantly positive relationship between corporate taxes and leverage.

5. Conclusion

To conclude, since the objective of the study is to examine the effect of external factors on the financing decisions of the listed non-financial firms of Pakistan, the empirical findings of the study reveal that external factors do influence the financial decisions of the firm. GDP growth rate, corporate taxes, banking sector development and development of stock markets significantly influences the financing decisions of the firms. On the other hand we find weak relationship between real interest rate, corruption and leverage. Moreover, the relationship between GDP growth rate, corporate taxes banking sector development, development of stock markets, real interest rate and leverage is positive whereas in case of corruption it is negative.

References

Bancel, F., & Mittoo, U. R. (2004). Cross-country determinants of capital structure choice: A Survey ofEuropean Firms. *Financial Management*, *33*, 103-132.

Baker, M., & Wurgler, J. (2002). Market timing and capital structure. *Journal of Finance*, *57*, 1-32.

Baltaci, N. & Ayaydin, H. (2014). Firm, Country and Macroeconomic determinants of capital structure: evidence from Turkish banking sector. *Emerging Markets Journal*, *3*(3), 46-58.

Baltagi, B.H. (1995). *Econometric analysis of panel data* (Chichester: Wiley).

Bartholdy, J. & Mateus, C. (2008). Taxes and corporate debt policy: evidence for unlisted firms of sixteen European countries. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1098370

Barton, S. L., & Gordon, P. J. (1988). Corporate strategy and capital structure, *Strategic Management Journal*, *9*(6), 623-632. http://dx.doi.org/10.1002/smj.4250090608

Bastos, D. D., Nakamura, W. T., & Basso, L. F. C. (2009). Determinants of capital structure of publicly-traded companies in Latin America: the role of institutional and macroeconomic factors. *Journal of International Finance and Economics, 9*(3), 24-39.

Bauer, P. (2004). Determinants of capital structure: Empirical evidence from Czech Republic. *Czech Journal of Economics and Finance*, *54*(1-2), 2-21.

Bopkin, G. A. (2009). Macroeconomic development and capital structure decisions of firms: evidence from emerging market economies. *Studies in Economics and Finance*, *26*(2), 129-142. http://dx.doi.org/10.1108/10867370910963055

Booth, L.V., Aivazian, A., Demirguc-Kunt, A., &Maksmivoc, V. (2001). Capital structure in developing countries. *Journal of Finance*, 56, 87-130.

Camara, O. (2012). Capital structure adjustment speed and macroeconomic conditions: U.S. MNCs and DCs. *International Research Journal of Finance and Economics*, *84*, 106-120.

Ciocchini, F., E. Durbin, & D. Ng. (2003). Does corruption increase emerging market bond spreads? *Journal of Economic and Business, 55*, 502-528.

Daskalakis, N. & Psillaki, M. (2008). Do country or firm factors explain capital structure? Evidence fromSMEs in France and Greece. *Applied Financial Economics*, *18*(1), 87-97. http://dx.doi.org/10.1080/09603100601018864

De Jong, A., Kabir, R., & Nguyen, T.T. (2008). Capital Structure Around The World: The Roles of Firm- And Country-Specific Determinants. *Journal of Banking and Finance*, *32*, 1954-1969.

Demirguc-Kunt, A., & Maksimovic, V. (1996). Stock market development and financing choices of firms. *World Bank Economic Review*, 341-371.

Demirguc-Kunt, A., &Maksimovic, V. (1999). Institutions, Financial Markets, and Firm Debt Maturity. *Journal of Financial Economics*, *54*, 295-336.

Diamond, D. (1984). Financial intermediation and delegated monitoring. *Review of Economic Studies, 51*, 393-414.

Dincergok, B., &Yalciner, K. (2011). Capital structure decisions of manufacturing firms' in developing countries. *Middle Eastern Finance and Economics*, 86-   100.

Fan, J., Titman, S., &Twite, G. (2012). An international comparison of capital structure and debt maturity choices. *Journal of Financial and Quantitative Analysis*, *47*(1), 23-56.

Frank, M. Z., & Goyal, V. K. (2009). Capital structure decisions: which factors are reliably important? *Financial Management*, *38*(1), 1-37.

Gajurel, D. P. (2006). Macroeconomic influences on corporate capital structure. Available at SSRN: http://ssrn.com/abstract=899049

Gaud, P., M. Hoesli, & A. Bender. (2007). Debt-equity choice in Europe. *International Review of Financial Analysis,16(3)*, 201-222.

Graham, J. R., & Harvey, C. R. (2001). The Theory and Practice of Corporate Finance: Evidence from the Field. *Journal of Financial Economics*, *60*, 187-   243.

Gujarati, D.N. (2004). *Basic Econometrics*, 4th edition, McGraw-Hill Book Co.

Hall, G., P. Hutchinson, & N. Michaelas. (2004). Determinants of the capital structures of European SMEs. *Journal of Business Finance and Accounting*, *31*, 711-728.

Hausman, J. (1978). Specification tests in econometrics. *Econometrica*, *46*, 1251-1271.

Henderson, B. J., Jegadeesh, N., &Weisbach, M. S., (2006). World markets for raising newcapital. *Journal of Financial Economics*, *82*(1), 63-101.

Hsiao, C. (1986). *Analysis of Panel Data*, Econometric Society monographs No. 11, New York: Cambridge University Press.

Huizinga, H., Laeven, L., &Nicodème, G. (2008). Capital structure and international debt shifting. *Journal of Financial Economics*, *88*, 80-118.

Kaufmann, D., & Wei, S.J. (1999). Does "Grease Money" speed up the wheels of commerce? *NBER working paper no 7093*

Keshtkar, R., Valipour, H. &Javanmard, A. (2012). Determinants of corporate capital structure under different debt maturities: empirical evidence from Iran. *International Research Journal of Finance and Economics*, *90*, 46-53.

Koksal, B., &Omran, C. (2014). Determinants of Capital Structure: Evidence from a major developing country. *Small Business Economics, 44*(2), 255-282.

Korajczyk, R.A. & Levy, A. (2003). Capital structure choice: Macroeconomic conditions and financial constraints. *Journal of Financial Economics*, *68*, 75- 109.

Kouki, M., & Said, H. B. (2012). Capital structure determinants: new evidence from French panel data. *International Journal of Business and Management*, *7*(1), 214-229.

Lee, C., & D. Ng. (2009). Corruption and international valuation: Does virtue pay? *Journal of Investing, 18*(4), 23-41

Leff, N. (1964). Economic development through bureaucratic corruption. *The American Behaviour Scientist,8*, 8-14.

Levine, R. & S. Zervos. (1998). Stock markets, banks and economic growth. *American Economic Review, 88*(3), 537-558.

Lui, F. (1985). An equilibrium queuing model of bribery. *Journal of Political Economy, 93,* 760-781.

Modigliani, F., & Miller, M. (1958). The cost of Capital, Corporation finance and the theory of investment. *The American Economic Review*, *48* (3).

Modigliani, F., & Miller, M. (1963). Corporate Income taxes and the cost of capital: A correction. *American Economic Review*, *53*(3), 433-443.

Moore, P. J., &Ruane, F. P. (2005). Taxation and the Financial Structure of Foreign Direct Investment. *IIIS Discussion Paper No. 88*

Myers, S. &Majluf, N. (1984). Corporate financing and investment decisions when firms have information investors do not have. *Journal of Financial Economics*, *13,* 187-221.

Nguyen, T., & Wu, J. (2011). Capital structure determinants and convergence. *Bankers, Markets and Investors,111*, 43-53.

Rajan, R., &Zingales, L. (1995). What Do We Know about Capital Structure? Some Evidence from International Data. *Journal of Finance*, *50*, 1421-1460.

Sayeed, M. A. (2011). The Determinants of Capital Structure for Selected Bangladeshi Listed Companies. *International Review of Business Research Papers*, *7*(2), 21-36.

Sett, K. &Sarkhel, J. (2010). Macroeconomic variables, financial sector development and capital structure of Indian private corporate sector during the period 1981-2007. *The IUP Journal of Applied Finance*, *16*(1), 40-56.

Titman, S., &Wessels, R. (1988). The determinants of capital structure choice, *Journal   of   Finance*,   43(1),   1-19. http://dx.doi.org/10.1111/j.15406261.1988.tb02585.x

Yeh, H., & Roca, E. (2010). Macroeconomic Conditions and Capital Structure: Evidence from Taiwan. *Discussion Paper no 2010-14*, Griffith Business School.