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A Dynamic Resourced Based View on Firm's Life Cycle Stages and Capital Structure Theories: A Comparative Analysis of Developed and Emerging Asian Markets

Abstract   *'Dynamic resource-based view' is the major inspiration for this study, which signifies the changes in paths & patterns of the evolution in organizational capabilities during its LCS. Using the Dickinson's (2011) firm's LCS, the study determined diverse behavior of traditionally established explanatory variables across stages. For the purpose of analysis GMM model has been used, the study conducted a comparative analysis of developed and emerging markets in Asia. The results showed higher COE capital during introduction and decline stages in emerging markets implying trade-off theory and dynamic resource-based view. Study denies association between COE capital and market-to-book value in developed markets in line with market timing theory Its concluded that COE's explanatory factors evolve across markets and firm's LCS the explanatory power of the general model is much higher when the study included LCS in its main model justifying resource-based view.*

Introduction

One of the most intriguing decisions faced by the firms from a very long time is which permutation of debt and equity will result in an optimal advantage. The empirical evidences in this regard had not shown any conclusive evidence as to what should be the "optimal capital mix. Although the main theories in play do recognize some ground components to meticulously explain the level of debt and equity, but nothing seems to be decisive in this regard" Yousaf(Yousaf & Iftikhar, 2018). Rather the earlier researches resulted in identification of unusual combinations, like the impact on the cost of equity (further mentioned as COE) in relation to profitability and liquidity turned out to be positive. On and off the result of the empirical evidence on the said area turned out to be inconsistent with the historical results.

According to Graham and Leary (2011) not considering the adequate dynamics is one of the main reasons of this indecisiveness and inconclusiveness in this area. What happens is that under different set of circumstances some unique factors are more dominant than the others while calculating the COE while in other situations they are completely irrelevant (Frank & Goyal, 2010). The phenomena of behavioral finance and changing economic conditions have been led to the emergence of the theory of FLC which originally belonged to the area of strategic management but is making its way in finance. This research revolves around the idea of how firms evolve across different FLCS and how these stages have an impact on profitability, cash flow, risk, investment decisions and finally the COE as perceived by the financial institutions, markets and investors. The main objective behind this study is to look about the cost of the equity from the point of view of strategic dynamics rather than just conventional way (Afza & Hussain, 2011).

The classic theories of COE capital like tradeoff and pecking order explain cost in relation to variables like total assets, size, growth, profitability bankruptcy and risk. The indecisiveness among the past researchers over the FLCS, this study will be following the Dickinson (2011) approach to

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categorizes firms according to their life cycle, the approach categorize the firms based on their investing, financing and operating cash flows.

Hence the study will be making a contribution not only to the theories of COE but the firm's business life cycle also with the inclusion of dynamic resource based view, will make a contribution for the managers, in the area of selection of different financing options. The study supports the idea of how various theories of cost of capital show different results in various stages of firm development as well as how they differ in the developed markets in comparison to developing markets.

According to Faccio & Xu, 2015, Debt and equity are two broader modes of financing generally available to the firms with each imposing costs on them. The cost of capital has the substantial importance as it could be used for projects' valuation, investors' risk premiums, investment and capital budgeting decisions (Câmara, et al. 2009).

COE is the main component of cost of capital; it constitutes the return that the investors of the firms demand on their investments in the firms and thus it becomes the fundamental element in investment decisions. There are various factors having impact on COE, related to firm's fundamental attributes and industry specific factors (Fama and French, 1989; Gebhardt et al., 2001).

Literature Review

This piece of research will create an insight among the two very distinctive fields, corporate finance and strategic management. Using the FLC as the focal point we will focus on the capital mix mainly the leverage of the firm during the different FLCS. The other important theory which will be the main part of the research is dynamic resource-based view (DRBV). Regarded as a dominate approach in the field of strategic management DRBV was first developed by Werner felt (1984) and afterword's work of Rumelt (1984) and Barney (1986) had a significant contribution towards development of this theory. The main purpose of the DRBV is to establish a sustainable competitive advantage, and particularly in the field of finance the optimal capital mix can be used as a source of establishing a competitive advantage which is maintainable (Faccio & Xu, 2015). According to Barney (1991) "the resource-based view" provides a layout of how firms can achieve competitive advantage by utilizing there internal strengths and reaching out to the environmental opportunities and managing the external threats as well as weaknesses inside the organization(Akpan et al., 2017). When it comes to the implementation of the DRBV in emerging as well as developed economies a lot of studies have shown affirmative results regarding profitability and growth of the firm when an advantage is achieved in the areas of human capital, relational capital and organizational resources.

Other than the DRBV the other theory following this study was introduced in 1970 with the area of organizational studies, but seeming became more popular in form of four stages of FLC (Bulan, L., N., Subramanian and L. Tanlu 2007). Miller and Friesen's (1984) work on FLC is a good reference point when it comes to finding common stages in earlier literature in this area. The five stages that came out to be are decline, revival, maturity, growth, and birth. The more recent and refined work in the area is of Dickinson (2011), according to him the firm's profitability vary across growth cross sectional and over time firm glided through different FLCS. The stages of the life cycle change as there is a change in investing and operational cash flows as keeping the concern of changing cash flows in relation to the retained earnings have been used as a better proxy to determine the stage of a firm (Akpan et al., 2017). For the purpose of this study we will be using the most comprehensive and comprehendible model of Dickinson (2011). When it comes to establishing the relation among leverage and FLC there isn't much literature to explain the difference in financing policies among different FLCS (Fluck 1999).

At various stage of the life cycle factors like profitability, retained earnings, size and dividends show diverse leverage levels, like if the firms are mature hey have different capacity and affordability to service debt as compared to the introductory or decline stages (DeAngelo, L. & Stulz, R.M., 2006). The pecking order theory suggests that, firms in different LCS have different level of information asymmetry among them which makes them more or less popular among the investors thus affecting their COE (Bulan, 2010).

Furthermore, according to the earlier researches by Frielinghaus, A., Mostert, B, & Firer, C, (2005) firms prefer to change their financing mix or leverage level as they progress from one FLCS to the other, this is what makes small and large firms to have different optimal capital mix (Lupi, Myint, &

Tsomocos, 2017; Myint, Lupi, &Tsomocos, 2017).Based on the above empirical gaps we hypothesize that

$H_{1:}$ Proxied by its cost of equity the capital structure changes, according to the FLCS in developed/emerging markets

Pecking order theory and Tradeoff theory are considered to be the two classic theories of capital structure and most of the time is considered, mutually exclusive. The third more recent theory regarding the capital mix is the market timing theory but is regarded as the complimentary theory to the existing two classics. Using bankruptcy and taxes as the major point of consideration trade off theory suggest that manager make their decision regarding the level of leverage of the firm.

According to (Frielinghaus, A., Mostert, B and Firer, C 2005) the firms in the initial stages of life cycle avoid high levels of leverage because of their cash flow constraints and exposure to bankruptcy, thus can't avail tax benefits associated with debt financing, therefore the static trade off theory, recommends a high low high pattern during the FLCS (Bulan, 2010).

Contrary to the above mentioned argument Pecking order theory suggests that there is no such thing as an ideal or optimal capital structure, hence the theory has a hierarchy consisting of first retained earnings then debt and equity at the bottom. This order helps to avoid the negative cost associated with issuance of new stocks. (Fama, E. & K.R. French, 2001) Empirically found the relation between leverage and profitability to be inverse and that debt is only issued in case of insufficient retained earnings and this is also implicitly related to FLCS as initial stages have no or very less retained earnings. The pecking order theory is supported among the mature firms but the smaller high growth firms face the issues related to the debt capacity (Frank & Goyal, 2010). Different capital structure theories explain relation between different explanatory factors of the FLC and thus give contrary results. This leads us to the formation of our second and third hypothesis

H_2: In developed/emerging countries the application of capital structure theories change as evolution occurs in firms from one stage to the other

H_3: In developed/emerging countries The tradeoff / pecking order / market timing theory are better (less) able to explain the Determinants of firm cost of equity in each of FLCS

Empirical Estimation

Sample Size and Data

In order to answer the questions, the study used panel data of around 800 firms from eight Asian countries including Japan, Thailand, Malaysia, China, India, Korea, and Indonesia and Pakistan. The number of firms varies across different years and at the same time; the stage-wise firms also remain changing over entire sample period. So the study uses unbalance panel data for the purpose of analysis. The sample description is provided in appendix 1 below. The description is provided on yearly basis for clarity of sample size. Only listed firms are included in the sample based on convenient sampling technique.

Empirical Model

During the study of relation between COE capital and FLCS sometime, endogeneity can be issue while examining the association between FLC and COE capital. There is every possibility that lower COE capital can effects firm's investment decisions and cause change in cash flow that ultimately results in change of FLC. The results in such a situation may be led by endogeneity with caused doubts on reliability of findings so it's only the dynamic GMM model which would reduce these problems. Hence, the study applied dynamic GMM model to address these concerns. Following Lupi, Myint, & Tsomocos, (2017); Myint, Lupi, &Tsomocos, (2017) the study constructs the equation as under:

$$R_{i,t} = \alpha_0 + \beta_1 CLC_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 BM_{i,t} + \beta_4 BETA_{i,t} + \beta_5 LOSS_{i,t-1} + \beta_6 LEV_{i,t} + \beta_7 ZSCORE_{i,t} + \varepsilon_{i,t}$$
$$Y_{it} = \delta y_{i,t-1} + X'_{i,t} + \mu_{it} \qquad i = 1 \dots \dots N, t = 1 \dots \dots T$$

In the above equation i, represents units and t equals to time and series dimension of the panel data. Similarly, Y_{it} is the dependent variable vector and $X'_{i,t}$ is the explanatory variables measuring the parameter vector. μ_{it} is the error term.

Overall Determinants of Cost of Equity

At first stage, the study used retained earnings as a proxy for FLC following and results are presented in table 1 below. The results showed retained earnings as positive determinants of COE capital in pooled model. This is in line with our first hypothesis that firms with higher retained earnings are considered as matured and they have less investment opportunity in line with earlier findings of Lupi, A., Myint, S., & Tsomocos, D. P. (2017). The study observed similar results for emerging economies in Asia. However, the results showed insignificant association between retained earnings and cost of capital in developed market. In developed market, the firms have easy access to finance and the macro-factors also contribute in firm's stability. As in developed market, the agency conflicts are not prevalent, financial mechanism is on the stronger side, market stability contributes to the financial health of the firms; the firm heavily rely on market and retained earnings are not the cause of concerned as compared to the market with weaker infra-structure. The firm's profitability is a positive determinates of COE in case of all three models. However, there is a variation in significance level of profitability in case of developed market ($\beta=0.039$ and $p<10\%$). This indicates that COE capital in developed markets do not heavily rely on firms profitability as compared to developing markets where agency conflicts and information asymmetry is on the higher side. a negative association is prevalent when it comes to market to book value and COE in case of pooled and developing markets; but this relationship changed into insignificant level in case of developed market. Surprisingly, the coefficient value is positive indicating a significant difference in its impacts on COE. Firm's size is negative determinants of COE capital in case of pooled and developed economies. However, the study observed inverse impacts in case of emerging economies indication those bigger firms are not financially constraints and hence they distribute more to the stockholders. Last year loss has insignificant association with COE capital in case of all three models. Importantly, the study found positive significant impacts of leverage on firm's COE capital in case of Asian economies. This shows that higher levered firms are exposed to financial constraint and they need more capital either to survive or for growth purposes depending their life cycle stage. Lastly, the firm's bankruptcy risk has positive impacts on COE capital. The firms with higher bankruptcy scores falls in gray area and investors are hesitant to invest in these firms; ultimately, it raises COE capital.

Table 1: Determinants of the COE

	Mode 1		Mode 2		Mode 3	
	Pooled		Developed		Developing	
Variables	Coefficient	p-value	coefficient	p-value	coefficient	p-value
Intercept	0.321***	0.044	0.001***	0.000	0.377***	0.000
Retained earnings	0.076**	0.052	0.054	0.110	0.0654***	0.000
Profitability	0.035**	0.022	0.039*	0.075	0.041***	0.001
Book to market value	-0.032**	0.044	0.061	0.225	-0.047**	0.028
Size	-0.009*	0.065	-0.010*	0.076	0.010**	0.013
Tax shield (nondebt)	0.0243	0.120	0.0542	0.264	0.054*	0.082
Tangible assets	-0.056**	0291	-0.035*	0.063	-0.082**	0.013
LOSSt-1	0.027	0.953	0.011*	0.076	0.012*	0.064
LEV	0.013***	0.000	0.017***	0.000	0.015***	0.000
ZSCORE	2-0.033**	0.041	-0.014**	0.012	-0.030**	0.029
Year Dummy	Yes		Yes		Yes	
Industry dummy	Yes		Yes		Yes	
Country dummy	Yes		Yes		Yes	
Diagnostic tests						
J statistic (P- value)	0.657		0.309		0.378	
Lag (2) Serial correlation(P-value)	0.236		0.262		0.209	
Durbin–Hausman test (P value)	0.373		0.189		0.230	

Stage-Wise Determinants of COE Capital

Secondly, the study highlights the determinants of COE during different LCS of firms. The study presented the results in table 2, 3 and 4 for developing, developed and pooled market results. As per results of the developing market in table 2 below, firm's profitability has positive association with COE capital during second and third stages, but remained insignificant during first and last stage. Hence, the findings strongly support the pecking order theory i.e. high profitability is associated with low debt and higher COE during maturity and growth stages. During other two stages (shakeout and decline), the profitability does not have any impacts on COE as according to Lupi, A., Myint, S., & Tsomocos, D. P. (2017). This may be contributed by the offset of contrary-signs effects. The results of growth opportunity (MTB) show less COE (negative effects) during introduction and declining stages. This can be in line with pecking order that determines higher debts for additional investments and these debts can set-off higher COE capital with no distribution of surplus among shareholders and favoring retained earnings. The firms generate more profit during growth and maturity stages and their higher liquidity ratio makes further debt excessive and forces the management to distribute more cash and thus increases cost to equity capital. Interestingly, this is also in line with the market timing theory; where, mature and growing firms take advantage of higher market to book value and ultimately issue new share that reduces financial leverage.

Firm's bankruptcy ratio (Z-score) is perhaps the positive determinants of COE during introduction and growth stages suggesting a cause of concerned for investors and exposing firms to higher COE in order to survive in the market. This is also in line with tradeoff theory where firms balance their sources of financing between debt and equity financing. The size has negative impacts on COE during growth and maturity stages. During these two stages, the firms can enjoy diverse sources of finance; higher debt affordability with less cost may explain higher COE capital in line with the tradeoff theory. The insignificant association of size at introduction stage in line with earlier findings of (Akingunola, Olawale, & Olaniyan, 2018), that used debt as dependent variable. In addition to this, the results showed insignificant association of non-debt tax shield with COE capital that contradicts the pecking order prediction as the study used non-debt shield as a proxy firm's capacity. The insignificant relation may be attributed by a subtle effect of market valuation (MTB). Based on these results, non-debt tax shield can be considered as un-necessary variable in case of emerging market where market to book value is prominent factor that attribute to COE. The study found negative and significant impacts of asset tangibility on COE during introduction, growth and declining stages in line with tradeoff theory as it links higher tangibility with lower distress cost. Moreover, these results also support the pecking order reckoning asset tangibility as a form of collateral for debt. During firm's declining stage, the asset tangibility does not explain COE because it decreases with size and profitability. Lastly, firm's leverage is negatively associated with COE because higher levered firms are financially constraint and they are more likely finance their required debt through equity financing or retained earnings during introduction and growth stages. For the purpose, they distribute less profit in their equity holders and firms are directed towards equity financing. Importantly, this relation is insignificant associated during maturity and declining stages showing no importance during these stages.

Table 2. Determinants of COE during Different Stages of Life Cycle (Emerging Market) mode

	Mode 1		Mode 2		Mode3		Mode 4	
	Introduction		Growth		Maturity		declining	
Variables								
	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
Intercept	0.011**	0.023	0.387**	0.032	0.401***	0.000	0.017**	0.012
Profitability	0.003	0.159	0.056**	0.040	0.055***	0.000	-0.060	0.423

	Mode 1		Mode 2		Mode3		Mode 4	
	Introduction		Growth		Maturity		declining	
Book to market value	-0.027**	0.070	-0.016	0.022	-0.077	0.042	-0.016**	0.054
Z-score	0.048**	0.028	0.0876	0.287	0.065**	0.082	0.064	0.756
Size	0.0541	0.477	-0.172**	0.018	-0.046**	0.024	-0.046	0.154
tax shields (nondebt)	0.0016	0.275	0.0176	0.381	0.0117	0.556	0.00598	0.752
Tangible assets	-0.041**	0.015	-0.011**	0.081	-0.011*	0.068	-0.076	0.543
Leverage	-0.013*	0.062	-0.064*	0.066	0.053**	0.559	-0.004	0.882
Year Dummy	Yes		Yes		Yes		Yes	
Industry dummy	Yes		Yes		Yes		Yes	
Country dummy	Yes		Yes		Yes		Yes	
Diagnostic tests								
J statistic (P-value)	0.846		0.398		0.486		0.516	
Lag (2) Serial correlation(P-value)	0.305		0.338		0.270		0.319	
Durbin–Hausman test (P value)	0.481		0.244		0.296		0.307	

Results and Discussion

The results of the developed market are shown in table 3 below. The results showed firm's profitability as positive determinants of equity capital during introduction, growth and maturity stages, but remained insignificant during decline. The finding supports the pecking order theory i.e. higher profit potential is associated with lower debt and higher COE during introduction, maturity and growth stages but the insignificant association during decline supports the tradeoff theory. The growth opportunity has positive effects on cost of during introduction, growth and maturity stages in line with tradeoff theory that states firm leverage ratio is a trade-off between cost of tax shield in terms of interest and financial crunch or distress. In contrast to emerging market, the firm's higher profitability ratio during these stages allow the firms to excel the market through equity or debt financing, as the excess to finance for firm with higher market value seems to quite easier than in emerging markets in line with market timing theory. ; where, even new entrance in the market and growing firms take advantage of higher market to book value and ultimately issue new share that reduces financial leverage like is work of Lemmon, M., & Zender, J. (2002)

Similarly, the study finds bankruptcy ratio (Z-score) is perhaps the positive determinants of COE during introduction and growth stages and maturity, suggesting a cause of concerned for investors and exposing firms to higher COE in order to survive in the market in line with tradeoff theory where firms balance their sources of financing between debt and equity financing. However, the relationship does not exist during declining stage. Moreover, the study finds negative significance relationship between firm's size and COE during introduction and growth stages; but, this relation is insignificant during maturity and declining stages. This can be explained by higher debt affordability with less cost equity capital in line with the tradeoff theory. The results of non-debt tax shield are significant during introduction, growth and maturity stages theory in line with pecking order theory. This signifies the importance of non-debt tax shield in Asian developed market. Asset tangibility is negatively associated with COE capital during introduction, growth and declining stages in line with tradeoff theory as it links higher tangibility with lower distress cost. Importantly, the results also support the

pecking order reckoning asset tangibility as a form of collateral for debt like the results of emerging markets. Lastly, the leverage is positively associated throughout firm's LCS indicating high leverage increases COE capital in line with results of developing markets.

Table 3. Determinants of COE during Different Stages of Life Cycle (Developed Market)

Variables	Mode 1 Introduction		Mode 2 Growth		Mode 3 Maturity		Mode 4 declining	
	Co-efficient	p-value	Co-efficient	p-value	Co-efficient	p-value	Co-efficient	p-value
Intercept	0.011**	0.023	0.387**	0.032	0.401***	0.000	0.017**	0.012
Profitability	0.053	0.054	0.056**	0.033	0.051***	0.000	0.022	0.422
Book to market value	0.027**	0.036	0.0122**	0.022	-0.032	0.021	-0.022**	0.042
Z-score	0.064**	0.034	0.076**	0.017	0.065**	0.020	0.021	0.876
Size	0.0541	0.477	-0.172**	0.018	-0.046**	0.024	-0.046	0.154
Tax Shield (nondebt)	-0.0183**	0.015	-0.034**	0.021	-0.0117**	0.056	0.0111	0.224
Tangible assets	-0.054**	0.016	-0.022**	0.045	-0.054*	0.077	-0.013	0.865
Leverage	-0.013*	0.062	-0.064*	0.066	0.053**	0.559	-0.004	0.882
Year Dummy	Yes		Yes		Yes		Yes	
Industry dummy	Yes		Yes		Yes		Yes	
Country dummy	Yes		Yes		Yes		Yes	
Diagnostic tests								
J statistic(P-value)	0.846		0.398		0.486		0.516	
Lag (2) Serial correlation(P-value)	0.305		0.338		0.270		0.319	
Durbin–Hausman test (P value)	0.481		0.244		0.296		0.307	

Conclusions

There are some similarities and contrast among emerging and developed market as far as the findings are concerned. As per results of the emerging and developed markets, the study found identical results in the case of both markets supporting resource-based vies, in Asian context. Both markets behave quite similar in case of profitability measure; but study observed a significant difference in the case of book to market value. The developed market support pecking order and trade of theory as there is positive significant effect of market to book value on COE in case of developed market; while this relationship is totally revert in the case of emerging market supporting trade-off theory only. In case of Z-score, the results are similar in case of both markets supporting trade-off theory, pecking order theory in emerging and developed markets. Firm's size supports trade-off theory in both markets in Asia. Non-debt tax shield supports pecking order theory in case of developed markets in Asia. The results of asset tangibility are in line with trade-off theory in emerging and developed markets; while, the study found evidences in the favor of pecking order theory and trade-off theory as the leverage has negative significant impacts on COE. The results of pecking order theory are quite similar for the developed and emerging markets.

The study provided comparative analysis of Asian market by dividing them into two groups. The results provided significant differences with respect to application of different theories, the study found remarkable changes in results when LCS are considered as the application of capital structure theories along with the COE changes during different phases a firm passes through during its course of action. In addition, the study mainly contributes to the work by identifying what fraction of the theories explains COE capital during different stages of firm's LCS. Similarly, the study found the pervasiveness of the theory's changes across firm's life stage and economy. In line with recourse-based views across firm's LCS, the study provides new comparative evidence in Asian context and confirms the consistency of Dickinson's (2011) model. The results of the study bear insight to corporate sector as COE is among one of the crucial financial decision to be made by management consequently evidencing that the FLCS should not be ignored during making capital decisions.

References

Akingunola, R. O., Olawale, L. S., & Olaniyan, J. D. (2018). Capital Structure Decision and Firm Performance: Evidence from Non-Financial Firms in Nigeria. *Acta Universitatis Danubius. Œconomica, 13*(6).

Akpan, S. S., Mahat, F., Nordin, B.-A. A., & Nassir, A. M. (2017). *Another look at risk-based capital regime, capital structure, insurer's risk profile and performance: A conceptual paper.* Paper presented at the Global Conference on Business and Economics Research (GCBER), Universiti Putra Malaysia, Serdang, Malaysia, August.

Bulan, L. T., & Yan, Z. (2010). Firm maturity and the pecking order theory. *Available at SSRN 1760505*.

Câmara, A., Chung, S. L., & Wang, Y. H. (2009). Option implied COE and its properties. *Journal of Futures Markets: Futures, Options, and Other Derivative Products, 29*(7), 599-629.

DeAngelo, H., & DeAngelo, L. (2000). Controlling stockholders and the disciplinary role of corporate payout policy: A study of the Times Mirror Company. *Journal of financial economics, 56*(2), 153-207.

Dickinson, V. (2011). Cash flow patterns as a proxy for firm life cycle. *The Accounting Review, 86*(6), 1969-1994.

Faccio, M., & Xu, J. (2015). Taxes and capital structure. *Journal of financial and quantitative analysis, 50*(3), 277-300.

Fama, E. F., & French, K. R. (1989). Business conditions and expected returns on stocks and bonds. *Journal of financial economics, 25*(1), 23-49.

Fluck, Z., & Lynch, A. W. (1999). Why do firms merge and then divest? A theory of financial synergy. *The journal of business, 72*(3), 319-346.

Frank, M. Z., & Goyal, V. K. (2004). The effect of market conditions on capital structure adjustment. *Finance Research Letters, 1*(1), 47-55.

Frielinghaus, A., Mostert, B., & Firer, C. (2005). Capital structure and the firm's life stage. *South African Journal of Business Management, 36*(4), 9-18.

Gebhardt, W. R., Lee, C., & Swaminathan, B. (1999). Toward an ex ante cost-of-capital. *Available at SSRN 145928*.

Graham, J. R., & Harvey, C. R. (2001). The theory and practice of corporate finance: evidence from the field. *Journal of financial economics, 60*(2-3), 187-243.

Hussain, M. F., Afzal, A., Asif, M., Ahmad, N., & Bilal, R. M. (2011). Impact of innovation, technology and economic growth on entrepreneurship. *American International Journal of Contemporary Research, 1*(1), 45-51.

Lemmon, M., & Zender, J. (2002). Debt capacity and tests of capital structure theories (Working paper University of Utah).

Lupi, A., Myint, S., & Tsomocos, D. P. (2017). How investment opportunities impact optimal capital structure. . .

Xu, G., Vocke, D., Faccio, D., Garnier, J., Roger, T., Trillo, S., & Picozzi, A. (2015). From coherent shocklets to giant collective incoherent shock waves in nonlocal turbulent flows. *Nature communications, 6*, 8131.

Yousaf, S., & Iftikhar, K. (2018). Firm-Specific Determinants of Capital Structure: Implication of Pecking Order Theory in Automotive Industry of Pakistan. *Abasyn University Journal of Social Sciences*.