CUSTOMIZED CORPORATE INVESTMENT MODELING ACROSS DEVELOPED AND DEVELOPING COUNTRIES: A NESTED TESTING ANALYSIS OF US AND PAKISTAN NON-FINANCIAL SECTOR

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Abstract

In line with strategic importance of corporate investment decisions, the extant literature has signified the importance of understanding whether and how institutional settings alongwith firm and country level environment influence the investment behavior of firms. This study warranted the need to understand how distinctive nature of sectors explains the investment decisions across developed and developing markets. The seminal attempt is made to append body of existing knowledge by observing the corroborated impact of sector level factors (munificence, dynamism and level of industry concentration) in line with firm and macroeconomic environment on firms' corporate investment decisions. Based on samples of US and Pakistani Textile Sector firms for period of 9 years from 2006-2015, the study employed Customized Econometric Estimator (Nested Testing Model). The findings validate the significance of sectors' nature in explaining the corporate investment behavior of Pakistani and US Textile Sector listed firms. The strand of study provided practical implications to corporate managers and policy makers to establish optimum investment models which are customized and preferred according to nature of sectors.

Keywords: Corporate Investment, Corporate Finance, Customized Modeling.

1. Introduction

The most significant and controversial issue in corporate finance since the work of Modigliani and Miller (1958)is that which company specific factors influence investment decisions made by executives of corporations? According to MM theory, both levered and unlevered have the same value it does not matter how firms are financed until and unless capital markets are perfect (no tax, no transaction cost, no asymmetry information, and availability of current information), but if we talk about the real world, the assumptions on which theory of irrelevance lie do not fulfill the real criteria. Corporate investment does not remain an activity of firm irrelevant to its financing mode anymore rather it is influenced by the extent to which firm is levered, dividend payout as well as extent of liquid assets in the firm. When we talk about firm specific characteristics than this thing given prime importance that firms are nested into sectors and external factors that indirectly affect firm couldn't be ignored. Olokoya and Omowunm (2012) argued that firm operating in competitive industry tends to face more dynamic uncertain and complex environment. Macroeconomic variables (inflation and GDP) have a huge impact in both developed, as well as in developing economies.

A few strands of literature focused on country level factors and their differences across developed and emerging economies, which have the power to influence financial decisions To the best of researcher's knowledge, there are relatively few studies which analyzed the effect of sectors or industries on investment decisions of firms as compared to literature focused on firm and country level characteristics and this empirical stream continue to be less explored. Therefore, how firm specific factors across sectors and country level influence investment decisions are unknown. Due to agency problems between stockholders, it is difficult for firms to access external source of fund in imperfect capital market. If a firm chooses to finance investment through debt agency issues will arise cost of using debt(Jensen & Meckling, 1976). On other hand risk associated with equity holder's increases, so their required return on equity ultimately increases (Akerlof, 1970). Thus, external source of fund become quite expensive for firms. According to Myers and Majluf (1984)firms have to pay high returns in the form of interest to lender and in form of dividend to stockholder if company uses external source of financing. Under such conditions, there is underinvestment problems arise because managers often lose the opportunities to even finance the project with positive NPV that is valuable for them.

Sectors are considered as engines of economic growth for financial and economic development of any country. Recent literature highlighted the significance of industry in explaining the firm's financial behavior(Naveed et al, 2015). Kayo and Kimura (2011) argued that the external factors which have the power to influence the firm level factors which operate under different sectors should not be ignored. Moreover, it would be pertinently important to conduct comparative investigation of customized investment models across developed and developing countries. The rational would be to examine how differently the combined impact of internal and external environment (Nested Tested Model) would help the firms operating in developed and developing markets to establish their customized investment models according to sectors' nature and institutional settings.

The importance of Comparative study between developed and developing countries is also oblivious from institutional difference hypothesis arguing that institutional settings have greater impact on management policies. As firms operated under specific institutional settings so firms' financial and investment decisions also get influenced by institutional differences. According to Financial Times Stock Exchange (2017), on the basis of economic status, industrialization and social development, countries could be divided into developed, advance emerging, secondary emerging and developing countries. In line with aforementioned empirical gap, the rational of selection of countries is closely linked with the settings and criteria defined by FTSE.

On the developing side, Pakistan is the best choice due to several reasons. Pakistan qualifies under every definition of developing economy and different resources categorize countries and provide their own list for developing and developed countries. Pakistan's economy is classified as developing with growing GDP, Struggle towards industrialization and improving social context. On the developed side, USA is being selected as developed country as per World Bank Development Indicators and Financial Times Stock Exchange which corroborates the technological advances, high economic and financial development.

In view of sector selection, textile sector is being picked because of its social and economic importance, asKeane and te Velde (2008) acknowledged, that the textile and clothing industry is vital for a country both short and long term economic development offering jobs to masses, foreign receipts and unrelenting trade if properly managed and favored by institutional settings. Also, the contribution of textile industry is contingent on its attraction and confidence of investors.In addition to this textile industry in Pakistan is supposed to contribute more than 50% of total manufactured export products and offering favorable working conditions for women contributing towards women empowerment. Similarly, textile industry of US is globally

recognized and in 2015 US was the 3rd largest exporter of textile products (U.N. COMTRADE Database). Also the choice of taking Pakistani textile companies is preferable because Pakistan is an emerging economy attracting attention of world financial markets as well as studies in Pakistan on customized model selection are very scarce. The study in hand tend to investigate the nature of different institutions by using customized or nested model to check combined impact of firm across country on corporate investment decision.

1. The brief objectives of the study include Investigation of significant factors which influence corporate investment decision across developed and developing countries

2. To ascertain the distinctive nature of Institutional settings, influence the firms' investment decisions of textile sector of developed and developing markets.

3. To examine whether Pakistan and US Textile Firms have Customized Investment Model. Pakistan and US listed textile firms have nested testing investment decision model or not.

4. To examine whether and how impact of sectors level variable on firms' investment behavior differs across developed and developing markets.

2. Literature Review
2.1 Firm Level Determinants

Pioneer of capital structure theories consider leverage as irrelevant to corporate investment decision but latter on empirical research on corporate structure witness controversial evidence on the relation between financial leverage and corporate investments. According to Mayer (1977), if a firm is highly relying on debt financing, it will be confronted with a problem of "debt overhang" incurring underinvestment. As a result, firm can lose opportunities to fund projects with positive NPV, thus reducing the value of firm. Inspired with Modigliani and Miller theory Hackbarth and Mauer (2012)examined and tried to explain this irrelevancy finding very negligible impact of leverage on investment policies of firm. Firms earn benefit in the form of tax shield, but the benefit is offset by a reduction in value as investment is undertaken earlier at low commodity price. Hence, net benefit of debt financing is not enough to bring a considerable change in investment policy. Ahn et al, (2006), documented negative relation between leverage and capital expenditure for diversified firms. On the contrary, Chen at al, (2010)studied the impact of leverage on value of firms listed at Taiwan securities exchange and concluded that leverage firms are greater in value than those of unlevered firms while ignoring possibility of bankruptcy.

Similarly, the vanishing trend of paying dividends to shareholder emphasizes that dividend play a significant role in the world of capital market imperfections where there are agency issues between various kind of stake holders between managers and shareholders (Sawacki, 2009; Singhani, 2005) as payout policies seem to diminish the agency conflicts by taking cash flows out of managers who may waste them in poor projects. Whereas, high payout ratio may considered as sign of financial distress especially, when attempts are made to maintain dividend(Gwilym et al, 2005). In contrast, Arnott and Asness (2003) reported that high dividend payout ratio historically associated with high growth of earnings.Fama and French (2002) argued that those firms who never pay dividends are regarded companies with a high growth and investment opportunities. On the contrary, they named dividend paying firms as "fallen angels" whose balance sheet are largely comprised of liabilities. Arif and Akbarshah (2013) performed sectoral analysis to find out the determinants of dividend policy in Pakistan. They identified five determinants (investment opportunities, tax, size life cycle and stage of corporation, profitability) and investment opportunities seem to have negative relationship with dividend, hence, results in line withFama and French (2002).

While, Baumol and wolf (1983) empirically found that performance in term of profitability have positive influence on R&D investments through two channels; through retained profits, R&D investments can be substantially increased. According to Cohen and Klepper (1996), the nexus between R&D is direct and positive. Biais and Casamatta (1999)argued that technological innovation open way for profitability which in turn increases investment and profit of firm. However, Klette and Kortum (2004) reported contrasting results as they found the relationship between productivity and firm's R&D as insignificant. Additionally, Fazzari at al, (1988) studied a sample of manufacturing firms and found positive correlation between investment spending and cash flows of the firm. They named the firms with higher sensitivity of investments to cash flows as highly financially constrained firms as they depend heavily on internal funds because of higher cost of outside resources due to agency problems or information asymmetries. Moreover, they classified the sample firms according to their dividend payout ratio. Firms with higher dividend payout ratio were less constrained with those of lower payout ratio. A number of studies raised questions to the finding of Fazzari et al. (1988)about financial constraints. Kaplan and Zingales (2000) described the nexus between investment and cash flows in another way. Their findings are considered as a major critic over the work ofFazzari et al. (1988) as they reported that less financially constrained firms show more investment cash flow sensitivity. According to them, high dividend paying firms are more constrained firms as compared to low dividend paying firms. They called the internal financing behavior of firms as managers acting in a conservative manner or a behavior that is not optimal.

2.2 Sector Level Determinants

Considering the sector level determinants,Almazan and Molina (2005)argued that those sectors and industries operating in ordinary environment with high munificence tend to have greater level of opportunities as compared to industries with low munificence. In relation to that, Almazan and Molina (2005) found greater variation in capital structure of firms, working in the sectors/industries which have greater growth opportunities. Due to less competitive environment, these sectors/industries therefore, enjoy greater profitability. Hereby, consistent with arguments, the firm operates in sectors with high level of munificence generate more profit. From this, it infers a positive relationship between munificence and leverage. Smith, Chen, and Anderson (2015) reported that those firms which are operated in highly munificent environment with above target debt, and have more abundant resources tend to reduce leverage and rapidly adjust toward their target debt. According to best of my knowledge, literature on sector level munificence with corporate is scarce.

Another important determinant is dynamism which is a measure of the extent to which environment is stable or unstable(Smith et al., 2015)so, by definition more dynamic environment is less stable. The environmental dynamism describes the rate and instability of changes in a firm's external environment (Simerly and Li, 2000). According to Jiao at al, (2011) there are significant differences in term of the impacts of environmental characteristics on firms across industries. A positive association between leverages and firm's performance which operate under stable environment was observed by Li and Simerly (2002). In contrast, leverage has negative relationship with those firms operated under more dynamic environment. Also on the basis of industry concentration, firms can be divided as high and low concentrated industries. HH Index which is stronger and common in calculating the concentration level of industries is the most important index of industry concentration(Moeinaddin et al, 2013). The level of industry concentration affects the firm leverage differently. The greater the HH Index level, the more concentration and less competitiveness and vice versa (Setayesh & Kargarfard, 2011).

2.3 Institutional Level Determinants

From the institutional or macro-economic factors, GDP through its growth rate provides best picture of economic condition of any country(Haggart, 2000). GDP per capita is obtained by dividing the country's gross domestic product, adjusted by inflation, by the total population (World Bank, 2012). GDP is the most significant measure of economic performance and it could be used as a tool to compare strength and weaknesses of various sectors. According to Lesotlho (2006) found positive and significant relationship of GDP with corporate investment while conducting study in Bostwana, these findings were also consistent with the findings ofMlambo and Oshikoya (2001).

Similarly, inflation has severe impact on corporate investments, economic growth and purchasing power. Generally and specifically, the effect of inflation on corporate investment has been a major source of debate in economic and business literature. Some researcher claimed a positive effect of inflation on corporate investments while other claim negative impact on investments. Byrne and Davis (2004)documented that due to higher rate of inflation real rate of return on investment reduced which lead to lower rate of investment. In the same way,Irwin (1987) further argued that real rate of inflation would include; changes in price of capital goods to output prices, changes in real output and changes in capital gain. He further explained that inflated national income is likely to lower investment income ratio which largely discourages corporate investments. Analien (2010) argued that inflation affects the firm financial decisions because it impacts thefinancial market and rate of return on the capital received by investments. Ozgur, Lévêque, and David (2007)argued that inflationary uncertainties do have serious consequences on corporate investments as inflationary pressure lead to poor growth in capital accumulation and hence ultimately depress corporate investments.

3. Methodology

Data of non-financial firms of USA and Pakistan listed on New York Stock Exchange and Pakistan Stock Exchange respectively taken for the period of 9 years from 2006-2015. The study excludes all financial firms like investment because the non-comparative nature of financial firms with non- financial firms. The study employs ordinary least square (OLS) regression and Artificial Nested Testing Model for customized model selection. Ordinary least square model is generally used for estimating un-known parameter in linear regression model and it is also known as constant coefficient model. According to Salahuddin (2010)pooled ordinary least square model assumes that intercept and co-efficient are constant. Equation 3.1 provides overall model for OLS estimation which reflects association between investment and firm level determinants across sectors and country level.

$$I_{i,t} = \beta_0 + \beta_1 LEV_{i,t} + \beta_2 DIV_{i,t} + \beta_3 PROF_{i,t} + \beta_4 OCF_{i,t} + \beta_5 MUN_{i,t} + \beta_6 DYN_{i,t} + \beta_7 HHI_{i,t} + \beta_8 INF_{i,t} + \beta_9 GDP_i, + \varepsilon_i \quad ....3.1$$

Where

LEV= Leverage/ Debt to equity ratio
DIV= Dividend payout/Total dividend per share divided by earning per share
PROF= Profitability/ return on equity
OCF= Operating cash flows/ sum of income before extraordinary items
MUN=Munificence
DYN=Dynamism
HHI= Herfindahl-Hirschman index
INF=Inflation/ consumer price index
GDP=Gross domestic productε_i=Error term

4. Results and Discussion

Table 1 comprises of results of pooled OLS regression analysis based on firm, sector and country level determinants of corporate investment decision. Results are further classified as overall sample of Textile firms, separately for US and Pakistan.

Table 1: Pooled OLS regression based on firm level, country level and sector level determinants.

Variables	Textile Sector		
	Overall	**Pakistan**	**US**
C	0.1012(I.109)	0.213(0.046)	0.166(1.457)
LEV	-0.1655(-1.3846) ***	-0.0328(-12.939) **	-0.0113(3.4997) *
DIV	-0.01427(-1.8437)	-0.0165 (-2.3380) ***	0.8730(4.0898)
ROE	0.00153(0.8638) **	0.6073(2.6125) *	+0.0107(-0.6028)
OCF	0.07898(3.1674) **	0.03218(1.1376) **	0.0330(1.8777) ***
MUN	3.9101(2.4186) **	0.01997 (2.1596) *	16.8733(2.874) *
DYN	-0.0311(-1.1115) **	-3555.59 (-2.3458) ***	-1907.68(1.433)*
HHI	-0.0178(-1.9895) **	3.4418 (9.9655) ***	-5.7638(-2.9917) **
INF	-0.00030(-0.2198) **	-0.0004(-0.4178) *	0.090811(3.2009) *
GDP	0.0055(-0.9909) ***	2.19804(2.4765) ***	0.1964(4.8761)
R squared	0.7513	0.6612	0.5578
Adj R sqr	0.7062	0.6165	0.5027

Table: 1 represents the firm level factors dividend (div), leverage (lev), profitability (ROE) operating cash flows (OCF) country level factors inflation (INF), GDP and sector level determinants munificence (MUN), Dynamism (DYN) and Hirsch men index (HHI) of investment on textile sector. The significance level is as under

*** Significant at the 1% level
** Significant at the 5% level
* Significant at the 10%level

Our Results observed consistency with work of Aivazian, Ge, and Qiu (2005),Ahn et al. (2006), Firth, Lin, and Wong (2008) and Ahmed and Ahsan (2011). Khan, Kaleem, and Nazir (2012)reported that in Pakistan, leverage causes reduction in management control over cash flows and thus reducing it agency cost.As this study investigates the impact of firm level, sector level and country level factors on corporate investments in sample of textile industry of both countries, the interesting results summary represented in Table: 2 and is comprise of significant determinants of corporate investments at firm, sector and country level.

Table 2: Summary of significant determinants of
corporate investments at firm, sector and country level

Factors	USA	Pakistan
	Significant Factors	**Significant Factors**
Firm level factors	Leverage (-), profitability (+), operating cash flows (+)	Leverage (-), profitability (+), operating cash flows (+), Dividend (+)
Sector level factors	Munificence (+), dynamism (+), Herfindahl Hirschman index (-)	Munificence (+), dynamism (-), Herfindahl Hirschman index (+)
Country level factors	Inflation (-),GDP (+)	Inflation (-), GDP (+)

The empirical findings have recorded the association between firm level factors and corporate investments. Results show that corporate investments are strongly affected by leverage, profitability and operating cash flows.Leverage maintains negative relation with corporate investment. This statistical outcome supports the findings of past studies of Aivazian et al. (2005) and Ahn et al. (2006). The inverse relationship between investment and leverage also supports the findings of Firth et al. (2008) as well as Ahmed et al. (2013). The negative relationship could be due to excessive cost of debt because leverage urges mangers to reduce investment on unprofitable units by limiting cash flows of firms through increased repayment obligations of firms, as well as raising responsibilities of bankruptcy (Aivazian et al. (2005) and Ahn et al. (2006). Relationship of leverage in Pakistan sample is in line with the study conducted in Pakistan (Khan et al, 2012) reported that leverage is effective enough in reduction of control of managers over cash flows, thus reducing its agency cost.

The Positive sign of profitability suggest that firms have greater growth opportunities. Hence, it shows consistency with the (Martínez-Carrascal&Ferrando, 2008) studied a large sample which included more than ten million nonfinancial firms from six European countries and analyzed investment decisions of firms in response to their financial position. They reported a positive relationship between profitability and investment expenditure; they suggested that firms focus on more investment activities when they have internal resources as compared to the external resources which create financing constraints due to information asymmetry problem also consistent with pecking order theory.Profitability has significant and positive impact on corporate investments in both overall and in textile sector ($\beta = 0.00153$, $p = 0.05$), ($\beta = 0.6073$, $p = 0.07$)pooled regression analysis, reveals that variation in profitability measured by return on equity have a positive impact on corporate investments. Heshmati and Loof (2008) described that both investment and profitability are interdependent and both are necessary for each other. Results of this finding are also in line with these findings.Martínez-Carrascal and Ferrando (2008) studied a large sample which included more than ten million nonfinancial firms from six European countries and analyzed investment decisions of firms in response to their financial position. They reported a positive relationship between profitability and investment expenditure; they suggested that firms focus on more investment activities when they have internal resources as compared to the external resources which create financing constraints due to information asymmetry problem. These results are also consistent with the findings of Jiang et al. (2006).

While in the US textile sector regression analysis, shows that profitability has insignificant negative relationship with corporate investment ($\beta = -0.0107$, $p = 0.118$). Results are consistent with (Klette&Kortum, 2002) as they found the relationship between productivity and firms' R&D as insignificant. Scherer (1965) found empirically that profitability has no significant impact on investment.

The insignificant result of dividend may be due to low dividend paying trend of Pakistani listed firms. In the Pakistani textile sector dividend shows negative relationship with corporate investment while in US textile sectors, it shows positive relation. For the impact of dividend payout on corporate investments, findings of pooled OLS regression indicates that there is insignificant impact of dividend payout on investment expenditure of corporations ($\beta = 0.0142$, $p = 0.289$) which means that variations in dividend payout do not influence investment expenditure of corporations. Insignificant coefficient shows consistency of findings with "separation principle" of Fama and Miller (1972) and also in line with study of Smirlock and Marshall (1983). Insignificant result could be due to low dividend paying in Pakistan as Mehar (2005) indicated that in emerging markets like Pakistan dividend decisions are likely to be taken when they favor managers more than those of shareholders. Cheema et al. (2003) also documented that only 35% Pakistani firms pays dividend because firms prefers to use earnings

as an internal source of financing rather than paying them as dividends. Overall results show contradiction when we analyse sectors separately. In the textile sector, dividend has significant negative relationship with corporate investments (β =-0.0165, p = 0.000). In Pakistan results are in consistent with the findings of DeAnglo (2006) who suggested that investment is negatively influenced by dividend as these results are also consistent with Easterbook (1984) described dividends as payout regular to the owners of firms and considered it adverse for high growth companies as they have to approach external sources of funds to finance their investments but considered it favors to shareholders as its give them power insider as these are also in line with (Arif and Akbar, 2013). In contrast to Pakistan, while analyzing the US textile sector results shows that dividend has significant positive relationship with corporate investments (β =0.8730, p = 0.03). This result is consistent with the findings of Bhattacharya (1979) who backed it by signaling theory; dividend may be used as a signal for current performance of a firm as well as future growth opportunities. A sudden rise in dividend gave positive signal to future performance while decrease in dividends gave negative signal to future growth as also mentioned by Gordan (1963).

Operating cash flows seem to be significant and positive impact on corporate investments in overall (β = 0.0789, p = 0.05), tPakistan (β = 0.03218, p = 0.04), and in US (β = 0.0330, p = 0.000). regression coefficient for operating cash flows indicates that investment of relies on internal cash flows as its shows consistency with the findings of Fizzare et al. (1988) who named firms relying on internal cash flows are "financially constrained." Positive value of coefficient indicates that Pakistani firms are financially constrained that could not approach costly external source of financing and therefore internally generated cash flows are used for financing of investment activities. Results are also in line with Lewellen (2013) who found positive relationship between firm investment and operating cash flows while controlling investment opportunities.

The proposed study reveals that the Textile sector of both Pakistan and US maintain persistent growth and firms with high munificence tends to have greater level of opportunities as compared to those with low munificence. Hereby, consistent with argument, the firm operate in sectors with high level of munificence generate more profit.

Results shows that there is a significant and positive relationship between munificence and corporate investment in overall sector analysis (β = 3.9101, p = 0.05). Regression analysis shows that in textile (β = 0.0199, p = 0.01), and US sector (β = 16.873, p = 0.01), munificence has significant positive relationship with corporate investment. This shows that the textile and US sector maintain persistent growth because those sectors or industries operating in ordinary environment with high munificence tend to have greater level of opportunities as compared to those with low munificence. Hereby, consistent with argument, the firm operate in sectors with high level of munificence generate more profit.

Dynamism shows a negative relationship with corporate investment based on both countries sample. According to Boyd (1995), those firms operating in a dynamic environment tend to deal with more uncertainty regarding growth. The environmental dynamism describes the rate and instability of changes in a firm's external environment (Dess and Beard, 1984; Simerly and Li, 2000). According to Kayo and Kimura (2011), those firms that operate within a particular sector or industry, expect to have a similar environment. The firm faces business risk or systematic risk when the environment under which they are operating becomes unstable in similar sectors or industries. Hence, Pakistani environment is more dynamic in facing high level of risk and less stable so, dynamism create more uncertainty therefore it significantly reduces the investment in Pakistani textile sector but this behavior is less aggressive for the sample of US.

HHI also has inverse relationship with corporate investment. Based on industry concentration; it can be divided as high or low concentrated industries. Generally, more concentrated industries avail more investment opportunities as they are more stable and less exposed to risk. In contrast low concentrated industries are exposed to high risk and high volatility in profitability. Once again for industrial concentration, in both overall and US textile sector HHI shows significant negative relationship with corporate investments (β = -0.0178, p = 0.05),(β = -5.7638, p = 0.05) while in Pakistani textile sector it maintains significant positive relationship with corporate investment (β = 3.4418, p = 0.001). On the basis of industry concentration, it can be divided as high or low concentrated industries. Generally, more concentrated industries avail more investment opportunities as they are more stable and less exposed to risk. In contrast, low concentrated industries are exposed to high risk and high volatility in profitability. The HHI in US sector maintain high level of concentration while, in overall and in Pakistan it maintains low concentration level.While from macro-economic factors the inflation maintained significant negative relationship with corporate investment based on overall analysis. It is consistent with (Choi et al, 1995: Luis 1980; Bryne and Davis, 2004; and Li, 2006) documented that due to higher rate of inflation real rate of return on investment reduced which lead to lower rate of investment. In the same way, Irwin (1987) further argued that real rate of inflation would include; changes in price of capital goods to output prices, changes in real output and changes in capital gain. He further explained that inflated national income is likely to lower investment income ratio and discourage corporate investments.

According to pooled OLS regression, the impact of GDP has been observed same entirely across two samples and in overall analysis, it has significant and positive impact on corporate investments in overall (β = 0.0055, p = 0.0002), in Pakistan (β = 2.1980, p = 0.012) and in US sector (β =0.1964, p = 0.000).Barro (1995) argued that if the propensity of investment is reduced due to the outcome of the inflation then economic growth is also reduced. He further elaborated it by explaining that an increase in average inflation by 10 percent point per year cause reduction in ratio of investment to GDP 0.4-0.6 percent point and this reduction in investment ultimately reduce real per capita GDP by 0.2-0.3 percent point per year. Annalien (2010), argued that as economic growth impact business operation of firms so it can also impact on investment activities of firms. Firms tend to experience rapid increase in sales and growth opportunities, during the period of high economic growth.

4.1 Nested Testing Investment Models

The Artificial Nested Testing Procedure provides the preferred model which is customized according to the nature of each Institution. Keeping in view the institutional behavior, distinctive nature of each country greatly influences the process of model selection across US and Pakistan. The results of analysis show that the selection of customized or preferred model mainly depend upon the nature of each country, type of investment, sample period and economic conditions of the country. Table: 3 provides summary of preferred models selected on the basis of ANTP. Based on overall sample, unrestricted model (L1+L2+L3) seems to be most significant model in determination of corporate investment during particular time period.Table 3 comprises of results of artificial nested tested model selection analysis and determines the Preferred Model for US and Pakistan.

Table 3: Preferred model selection

Sample		
	Preferred Model	**Model Name**
Overall	L1+L2+L3	L1=firm level L2= sector level L3=country level
Pakistan Textile	L1+L2+L3	L1=firm level L2= sector level
US Textile	L1+L2	L1=firm level L2= sector level L3=country level

Dependent Variable: Corporate investment

On the basis of artificial model selection analysis across countries during period of 2006 to 2014, textile sector of US shows that model L1+L2 is preferred model for investment pointing that the corporate investment is mainly depending upon firm level and sector level factors. While in case of textile sector of Pakistan investment rely on unrestricted model (L1+L2+L3) its mean L1 firm level factors, L2 sector level factors and L3 country level factors the combination of all these factors are of prime importance. However, overall analysis shows that unrestricted model (L1+L2+L3) becomes pertinent to investment which, means that firm level factors, sector level and country level factors have significant impact on corporate investment of both countries textile sector. Consistent with main point, the distinctive nature of each country directly influences the process of model selection for corporate investment.

Conclusion

The empirical findings of study highlighted the hierarchal importance of internal and external factors on the firms' corporate investment decisions across developed and developing economy. The firm level factors are of prime importance in firm's investment decision making. Firms mostly rely on their internal cash flows. Moreover, this study provides in detail determinants of corporate investment and corporate investment decisions of firms across sectors are inclined by the environment in which they are operating. Effect of institutional differences on behavior towards investment resulted into heterogeneity of results for the sample of US and Pakistan textile firms. Firms specific factors are nested into different sectors specific factors and all these nested further into country level factors or macroeconomic variables which effect these differently in both developed and developing economies.

Another theoretical contribution of the study offers insight into Artificial Nested Tested procedure. This model basically provides dynamic or preferred model across sectors that best fit into textile and US sector of US and Pakistan. In view of the above statistical analysis, it is suggested that on overall unrestricted model is best fitted in Pakistan economy because, in Pakistan economy there is high instability greater level of uncertainty that's why external factors like GDP and inflation have huge impact on corporate investments. But,in case of US impact of macroeconomic factors are comparatively less significant on investment decision primarily due to having less fluctuated institutional settings of US as developed economies are marked to be. Due to time limitation, the data include observations only from single sector of both countries while addition of other sectors and use of balance data is recommended and to capture more evident depiction other sectors can be incorporated in future research.

References

i. Ahmed, A., & Ahsan, H., 2011. Contribution of services sector in the economy of Pakistan. *Pakistan Institute Of Development Economics Islamabad,*Volume 79.

ii. Ahn, S., Denis, D. J., & Denis, D. K., 2006. Leverage and investment in diversified firms. *Journal of financial economics,* 79(2), pp. 317-337.

iii. Aivazian, V. A., Ge, Y., & Qiu, J., 2005. The impact of leverage on firm investment: Canadian evidence. *Journal of Corporate Finance,* 11(1), pp. 277-291.

iv. Almazan, A., & Molina, C. A., 2005. Intra-Industry Capital Structure Dispersion. *Journal of Economics & Management Strategy,* 14(2), pp. 263-297.

v. Arif, A., & Akbarshah, F.,2013. *Determinants of dividend policy: a sectoral analysis from Pakistan.*

vi. Arnott, R. D., & Asness, C. S., 2003. Surprise! Higher dividends= higher earnings growth. *Financial Analysts Journal,* 59(1), pp. 70-87.

vii. Biais, B., & Casamatta, C., 1999. Optimal leverage and aggregate investment. *The journal of finance,* 54(4),pp. 1291-1323.

viii. Byrne, J. P., & Davis, E. P., 2004. Permanent and temporary inflation uncertainty and investment in the United States. *Economics Letters,* 85(2),pp. 271-277.

ix. Chen, H.-L., Hsu, W.-T., & Huang, Y.-S., 2010. Top management team characteristics, R&D investment and capital structure in the IT industry. *Small Business Economics,* 35(3), pp. 319-333.

x. Cohen, W. M., & Klepper, S., 1996. Firm size and the nature of innovation within industries: the case of process and product R&D. *The Review of Economics and Statistics*, pp. 232-243.

xi. Fama, E. F., & French, K. R., 2002. Testing trade-off and pecking order predictions about dividends and debt. *Review of financial studies,* 15(1), pp. 1-33.

xii. Fazzari, S. M., Hubbard, R. G., Petersen, B. C., Blinder, A. S., & Poterba, J. M., 1988. Financing constraints and corporate investment. *Brookings papers on economic activity,* 1988(1), pp. 141-206.

xiii. Firth, M., Lin, C., & Wong, S. M.,2008. Leverage and investment under a state-owned bank lending environment: Evidence from China. *Journal of Corporate Finance,* 14(5), pp. 642-653.

xiv. Gwilym, O. A., Seaton, J., & Thomas, S. H., 2005. Dividend yield investment strategies, the payout ratio and zero-dividend stocks. *The Journal of Investing,* 14(4), pp. 69-74.

xv. Hackbarth, D., & Mauer, D. C., 2012. Optimal priority structure, capital structure, and investment. *Review of Financial Studies,* 25(3),pp. 747-796.

xvi. Haggart, B., 2000. *The gross domestic product and alternative economic and social indicators: Parliamentary Research Branch.*

xvii. Irwin, F., 1987. *Effect of Inflation on Saving, Investment and Capital Market.*

xviii. Jensen, M. C., & Meckling, W. H., 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics,* 3(4), pp. 305-360.

xix. Jiao, H., Alon, I., & Cui, Y., 2011. Environmental dynamism, innovation, and dynamic capabilities: the case of China. *Journal of Enterprising Communities: People and Places in the Global Economy,* 5(2), pp. 131-144.

xx. Kaplan, S. N., & Zingales, L., 2000. Investment-cash flow sensitivities are not valid measures of financing constraints. *The quarterly journal of economics,* 115(2), pp. 707-712.

xxi.   Kayo, E. K., & Kimura, H., 2011. Hierarchical determinants of capital structure. *Journal of Banking & Finance,* 35(2),pp. 358-371.

xxii.   Keane, J., & te Velde, D. W., 2008. *The role of textile and clothing industries in growth and development strategies. Overseas Development Institute. Dostupno* [Online]. Available at: *www. odi. org. uk/resources/docs/3361. pdf* [Accessed 28 June 2013.].

xxiii.   Khan, A., Kaleem, A., & Nazir, M. S., 2012. Impact of financial leverage on agency cost of free cash flow: Evidence from the manufacturing sector of Pakistan. *Journal of Basic and Applied Scientific Research,* 2(7), pp. 6694-6700.

xxiv.   Klette, T. J., & Kortum, S., 2004. Innovating firms and aggregate innovation. *Journal of political economy,* 112(5), pp. 986-1018.

xxv.   Lesotlho, P., 2006. *An investigation of the determinants of private investment: The case of Botswana.* University of the Western Cape.

xxvi.   Li, M., & Simerly, R. L., 2002. Environmental dynamism, capital structure and innovation: an empirical test. *The international journal of organizational analysis,* 10(2),pp. 156-171.

xxvii.   Mlambo, K., & Oshikoya, T. W., 2001. Macroeconomic factors and investment in Africa. *Journal of African Economies,* 10(2),pp. 12-47.

xxviii.   Modigliani, F., & Miller, M. H., 1958. The cost of capital, corporation finance and the theory of investment. *The American Economic Review*, pp. 261-297.

xxix.   Moeinaddin, M., Nayebzadeh, S., & Ghasemi, M., 2013. The Relationship between Product Market Competition and Capital Structure of the Selected Industries of the Tehran Stock Exchange. *International journal of academic research in accounting, finance and management sciences,* 3(3), pp. 221-233.

xxx.   Myers, S. C., & Majluf, N. S., 1984. Corporate financing and investment decisions when firms have information that investors do not have. *Journal of financial economics,* 13(2), pp. 187-221.

xxxi.   Naveed, M., Ramakrishnan, S., Ahmad Anuar, M., & Mirzaei, M., 2015. Factors affecting speed of adjustment under different economic conditions: Dynamic capital structure sensitivity analysis. *Journal of Chinese Economic and Foreign Trade Studies,* 8(3), pp. 165-182.

xxxii.   Ozgur, A., Lévêque, O., & David, N., 2007. Hierarchical cooperation achieves optimal capacity scaling in ad hoc networks. *IEEE Transactions on information theory,* 53(10),pp. 3549-3572.

xxxiii.   Salahuddin, M. M., 2010. Generational differences impact on leadership style and organizational success. *Journal of Diversity Management,* 5(2),pp. 1.

xxxiv.   Setayesh, M., & Kargarfard, M., 2011. The investigation of effect of product market competition on capital structure. *Journal of Empirical Research of Financial Accounting,* 1(1), pp. 9-30.

xxxv.   Smith, D. J., Chen, J., & Anderson, H. D., 2015. The influence of firm financial position and industry characteristics on capital structure adjustment. *Accounting & Finance,* 55(4),pp. 1135-1169.