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Impact of Corporate Political Connections on Cost of Equity: A Dynamic Panel Approach

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ABSTRACT

We analyze the impact of corporate political connections on the cost of equity of non-financial firms listed at the Pakistan Stock Exchange. We extract data from the DataStream and Election Commission of Pakistan for the years 2001 to 2018. The Generalized Method of Moments is used for data analysis. This research finds that firms use political connections to enjoy a lower cost of equity capital. Further, firms with strong ties to political power obtain more benefits on financing cost as compared to non-connected firms. Besides, we also find that firms affiliated with a large business group enjoy a lower cost of equity than non-affiliated connected firms. The findings may be helpful for regulators to formulate suitable policies concerning the use of corporate political strategies and to assist unconnected and non-affiliated firms to access finance easily.

Key words: Corporate political strategies; Generalized Method of Moments; affiliated firms; the cost of equity

1. INTRODUCTION

The government plays an important role in the economy as a resource provider and controller. Moreover, its public policies directly or indirectly affect productivity (Silva et al., 2016). Companies develop strategies in the form of connections with the government to obtain and utilize the resources and influence public policies and decisions (Hillman, 1999). These corporate political strategies play an influential role in the companies, regardless of the failure or success of a firm that uses this strategy. So, it instigates the value of such connections in the business world (Houston et al., 2014). Faccio (2010) and Chaney et al. (2011) provide evidence that the researchers focus on

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enterprises having political involvement. Fisman (2001) explains that politically connected firms obtain finance at a low rate and attract investors. Firms tend to create direct and indirect political connections. Direct connections mean that firms include politicians in their board of directors or made a shareholder develop connections (Fisman, 2001; Faccio, 2010 and 2006). Indirect connections mean firms develop a relationship through friendship with political parties and may develop connections by participating in the election campaign of political parties or support through giving donations (Aggarwal et al., 2012 and Cooper et al., 2010)

Faccio (2006) finds that politically connected firms are dominant as compared to non-connected firms, especially in countries having a weak legal system. Aggarwal et al. (2012) explain that corporate political strategies are not exclusive to the environment in those countries where corruption exists and enforcement of property rights is weak. One study conducted in Canada by Morck et al. (2000) finds that large business family firms get benefits from the government by utilizing unlimited resources. Corporate political connections affects the innovation process in the firms and enhance the innovative activities (Krammer and Jimenez, 2020; Su et al., 2019; Cheng et al., 2019). Developed economies also present firms with political connections, according to studies of the U.S. economy by Goldman et al. (2009) and Cooper et al. (2010). Wu et al. (2012), find business groups and political parties take benefits from each other. Business groups obtain internal information and subsidies from the government (Wu et al., 2012), easy access to finance at a low rate, loans from government-owned financial institutions (Houstan et al., 2014), to capture large market shares, and investments with low cost (Muttakin et al., 2018). Pham (2019) explains that the political connections of a firm reduces the uncertainty in government policies.

According to Rehman (2006), the involvement of politicians in Pakistani local businesses has existed for a long time. Further, since the partition of the subcontinent and the establishment of Pakistan, many of the politicians in Pakistan have their business organizations in both financial institutions (e.g. banks) and non-financial institutions. Moreover, politicians also have connections with firms by taking the membership of the board of directors or through informal relationships (friendships) with the higher

management of firms. Irrespective of the nature of relationships or connections, the participation of politicians in governance generates opportunities for firms to obtain equity financing at a low cost. According to Khawaja and Mian (2005), politically connected firms obtain financing at a low rate and with soft terms. Politically connected firms have easy access to credit from government-owned banks (Ashraf and Ghani, 2005). In Pakistan, politicians contested general elections held in 2002, 2008, 2013, and 2018 with the support of different businesses. In Pakistan, only a few families control most of the business. Over time, these groups diversify their business enormously, becoming larger and more visible as shown in Appendix A.

The political parties and politicians in Pakistan have owned and controlled many non-financial firms in various sectors ranging from agriculture allied to other non-financial firms without any legal restrictions. Phan et al. (2020); Wong and Hooy (2018) indicate that the types of corporate political strategies also matter. From existing literature, we find a lack of evidence relating to the effects of political connection on the cost of equity in Pakistan. Further, financing is the key for non-financial firms in Pakistan for a smooth-running business in a competitive environment. Therefore, considering the importance of financing and political connection of non-financial firms in Pakistan, we address this literature gap by analyzing the effects of political connections on the cost of equity financing in agriculture allied and other non-financial firms in Pakistan. Our work contributes to the body of knowledge by providing evidence of the relationship between corporate political strategies and the cost of equity from an emerging market (Pakistan). Only a small number of studies have investigated the cost of equity and corporate political strategies. Those studies resulted in inconclusive findings. Hence, we instigate the relationship between corporate political strategies and the cost of equity in Pakistan.

The objective of this study is to find the impact of corporate political connections on the cost of equity of non-financial firms listed in the Pakistan stock exchange (PSX). The data is collected from DataStream and the Election Commission of Pakistan for a period of eighteen years from 2001 to 2018. The Generalized Method of Moments (GMM) is used for data analysis. The result shows firms that use corporate political strategies (political connections) have a low cost of equity financing as compared to non-

connected firms. The findings of this research provide useful policy implications for investors to know the importance of political connections while making the investment decision, as well as for firms' management while making a financing decision.

The remaining part of this paper is organized as follows. The brief literature is provided in section 2 followed by methodology in section 3. Section 4 contains the empirical findings and discussion. Section 5 concludes the study and indicates future directions.

2. LITERATURE REVIEW

According to the resource-based view, organizations use corporate political connections to obtain benefits in the form of competitive advantage. Moreover, explain that these benefits may be in the form of easy access to credit (Claessens et al., 2008), bailout facilities (Blau et al., 2013), investment with a low rate (Houston et al., 2014), the government provided subsidies (Wu et al., 2012), and government contracts on preferential bases in bidding or procurement (Glodman et al., 2013). The literature also suggests that firms that use corporate political strategies help to pay the lower cost of equity (Boubakri et al., 2012), enjoy tax shields (Adhikari et al., 2006; Faccio, 2010) and regulatory authorities provide special favors to connected firms (Correia, 2014). Phan et al. (2020) find that politically connected firms have a significant and positive relationship with corporate investment. They also explain that corporate investment in politically connected firms also increases their profitability and firms obtain equity financing at a low cost. Hossain and Kryzanowski (2020) found that political corruption reduces the cost of equity investment. The literature shows that politically connected firms enjoy easy access to finance because of connections with the government (Faccio, 2006).

One school of thought advocates that political connection helps to improve the firm performance by obtaining a low cost of finances (Houston et al., 2011). Contrary to this Kim et al. (2019) highlight that political connections may make firms prone to lose their peer connections and consequently their industry performance. Andreasson et al. (2016) argue that campaign donations are more likely to create agency problems. Some other studies, such as those of Bunkanwanicha and Wiwattanakantang (2009); Boubakri

et al. (2012) have contrary opinions about the relationship between politically connected firms and the cost of equity. Due to the differing results from the studies, it is difficult to draw a definite conclusion about the relationship between political connections and the cost of equity. According to Klarin and Ray (2019) that firms use more corporate political connections at the time of institution to avoid the legal hurdles. Regardless of the above findings, it is theorized that politically connected firms have lower costs of equity financing, which helps these firms to increase their investment more than non-connected firms.

Houston et al. (2011) explain that politically connected firms obtain economic benefits from the government in the form of subsidies. Further, government officials and politicians can also obtain rewards. So, connections provide benefits for both parties. Fisman (2016) observes politically connected firms obtain more advantages from the government than non-connected firms due to the close ties with government officials. Lee et al. (2015) argue that the shareholders' relationship with the government also increases the value of the firm and facilitates easy access to external finance. Djankov et al. (2008) also show that private firms have better control, better allocation of resources, and efficient cash flows so politicians prefer a relationship with private firms over those with public ownership. This is because politicians can obtain more advantages from private firms in the form of bribes or through additional employment. Nahar et al. (2016) provide evidence that firms save their assets through connections with politicians or other government officials, particularly in those countries where political ties are important. Belghitar et al. (2019) also explain that politically connected firms obtain benefits in the form of easy access to finance from government-owned financial institutions. The literature has shown that political connections have great relevance to the cost of equity, but mixed approaches are observed among corporate political strategies and the performance of corporations. Faccio (2010) explains that politically connected firms show weak accounting performance. Sharma et al. (2020) found that politically connected firms has positive relationship with export performance. Bertrand et al. (2007) conclude that firms with political connections have lower profits due to an increase in wages. Based on the above discussion, we develop the following hypothesis:

Hypothesis 1 (H₁): *Corporate political connections have a negative impact on the cost of equity of the firm*

A study conducted in China by Yu and Robert (2009) finds that a firm's affiliation with a large business group has a positive impact on the value of the firm. They also find that affiliated firms have a significant and negative impact on the cost of financing. Khanna and Yafeh (2007) use a sample from different economies and find that in emerging economies affiliated firms have a negative association with performance. Joni et al. (2020) conclude that firms affiliated with large business groups have a negative association with the cost of equity financing. Inconclusive results are found in the literature. For example, Carney et al. (2011) propose that firms associated with large business groups, performance, and cost of financing have empirically and theoretically complex outcomes. They find that the effects of membership in large business groups vary according to the country surveyed: it has positive a relationship in Colombia, Hong Kong, and Chile; a negative relationship in France and Japan; and an insignificant relationship in India, China, and Taiwan.

Furthermore, Ma et al. (2006) conduct a study by using a sample of 1119 firms listed in China and find that firms having membership of large business groups have a significant and negative impact on the cost of financing. According to empirical evidence, results show that firms affiliated with business groups have a low cost of financing as compared to non-affiliated firms. Hence, it is hypothesized:

Hypothesis 2 (H₂): *The large business group affiliated connected firms negatively affect the cost of equity of the firm.*

3. RESEARCH METHODOLOGY

We analyze the impact of corporate political connections on the cost of equity of non-financial firms in Pakistan. We collect data from DataStream and the Election Commission of Pakistan. There are 537 firms, which are actively listed on the PSX, representing 35 sectors. Among the 537 active listed firms, 127 firms are from six financial sectors and are excluded from our sample. 410 firms comprising of 29 non-financial sectors are of interest in our study and explored for sample purpose. The sample

has 258 Agriculture allied firms, representing 13 sectors, and 152 ‘other’ non-financial firms representing 16 sectors. After the screening, incomplete data were eliminated from the sample and 250 firms remained for analysis. The data set includes 250 non-financial firms for the period of eighteen (18) years 2001 -2018. The results are obtained by using the system GMM approach which controls the problems of endogeneity in the data set (Arellano and Bond, 1991; Arellano and Bover, 1995). González (2013) explains that this approach deals with autoregressive properties of dependent variables and resolves the problems of endogeneity present dependent variables as well as unabsorbed firm-specific characteristics. For robustness, we use the fixed-effect model based on the Hausman test to analyze the results.

In our study politically connected non-financial firms listed in the Pakistan Stock exchange, are used for analysis. The firm is politically connected when the CEO, chairman, shareholders (holding more than 10% shares) and members of the board have a relationship with politicians or government officials (Belghitar et al., 2019; Tihanyi et al., 2019; He et al., 2019; Boubakri et al., 2016; Faccio, 2010). Moreover, for this purpose, we used a combination of two data sets. In the first set, we obtain information from the CEOs, chairman, board members, and large shareholders. In the second set, we collect information about politicians and government officials. Then these two data sets are matched to identify the political connections. If the firm is connected the value of ‘1’ is assigned, and if not connected the value of ‘0’ is assigned (Boubakri et al., 2016; Faccio, 2010). Further, bifurcate a sample into affiliated firms and non-affiliated connected firms with large business groups present in Pakistan (Rehman, 2006; Ahmad et al., 2018). The firm is affiliated when it has a connection with large business groups (see Appendix A). If the firm is affiliated with a large business group, it has a value of 1, otherwise 0. The cost of equity is measured by using the capital asset pricing model (CAPM). Anwar et al. (2019) and Bozec (2011) use the same measure for the cost of equity. Portfolio managers and investors use CAPM as a central model to determine the expected risk given the expected return on their investment. Further, the PSX is a market where prices tend to fluctuate quickly. Therefore, investors and portfolio managers find it difficult to quantify risk related to securities and expected return on their investment (Jawaid et al. 2011).

Furthermore, CAPM is used to resolve the problem of imprecision in the estimation of the realized return model. According to Fama and French (1997), potential problems exist in the realized return model and cause the imprecision of estimating the cost of equity, so they suggest the CAPM reduces this problem. Khan (2016) claims that it is difficult to find a consensus on the best model for the cost of equity calculation. However, CAPM is still considered a good model for the calculation of the cost of equity. Different recent studies i.e. Khan (2016); Nosheen and Sajjad (2018); Arslan and Abidin (2019); Dakhlaoui and Gana (2020) used CAPM to measure the cost of equity. Therefore, we use CAPM to measure the cost of equity.

We use a set of control variables viz., collateral, firm age, profitability, cash flow, and firm size. Charumilind et al. (2006) conclude that collateral has a negative relationship with the cost of equity as measured through net fixed assets and inventory to total assets of a firm. Luo and Ying (2014) provide an inverse impact of firms' age on the cost of equity. The age of the firms is measured by using the number of years since the establishment of a firm. Boubakri et al. (2012) find that profitability has a negative relationship with the cost of equity. Saeed et al. (2019) explain that profitable firms provide higher returns to their investors which increases the cost of equity. The results of profitability and cost of equity are mixed (Negative and positive). Profitability is measured through the net profit to total assets ratio (Gray et al., 2016). Cash flows from operations have a negative impact on the cost of equity (Chaney et al., 2011). It means that firms use their operations efficiently to increase the investment in total assets and thereby reduce the cost of equity. Cash flow from operations to total assets is used to measure the cash flows. Francis et al. (2005) document the negative relation between firm size and the cost of equity. Large size firms have stronger relationships with politicians and obtained equity financing at a low cost. A natural log of total assets is used to measure the firm size. Table 1 summarizes the definitions of the variables and shows support from the literature.

Table 1: Summary of Variables

Variables	Sym.	Definition/Calculation	References
Cost of Equity	K _e	Capital Asset Pricing Model (CAPM)	Anwar et al. (2019); Bozec and Bozec (2011)
Corporate political connections	CPCN	When the firms connected it assigned 1 and otherwise 0	Amanat et al. (2020); Zhang et al. (2019); Tee (2020); Liu and Zhang (2019); Boubakri et al. (2016)
Collateral	CoL	Net fixed assets and inventory divided by total assets	Saeed et al. (2019); Charumilind et al. (2006)
Firm Age	AGE	Number of years since the establishment of a firm	Hunjra et al. (2020); Tihanyi et al. (2019); Luo and Ying (2014)
Profitability	PRF	Measured through the ratio of net profit to total assets (ROA)	Gray et al. (2016); Tsai et al. (2019)
Cash Flow	CFO	Measured through Cash flow from operation to total assets	Chaney et al. (2011); Wang et al. (2019)
Size	SZ	Natural log of total assets	Hashmi et al. (2019); Shi et al. (2018); Gao et al. (2019)

We use the following model:

$$Ke_{it} = \beta_0 + \beta_1 CPCN_{it} + \beta_2 CoL_{it} + \beta_3 AGE_{it} + \beta_4 PRF_{it} + \beta_5 CFO_{it} + \beta_6 SZ_{it} + \beta_7 YD_{it} + \mu_{it}$$

-----Eqn.1

Where Ke = cost of equity; CPCN= corporate political connections; CoL= collateral; AGE= age of the firm; PRF= profitability; CFO= cash flow from operation; SZ= size of the firm; YD= year dummy; β_0 is constant; β_1 to β_7 are slopes of explanatory and control variables; μ is an error term; i is firm and t is period.

4. RESULTS AND ANALYSIS

This section presents the summary statistics (Table 2) and then the results of the various tests of the data on the sample of non-financial firms selected from the PSX.

Table 2: Summary statistics

	Full Sample				Agriculture Allied				Other Non-Financial			
	Mean	SD	Min	Max	Mean	SD	Min	Max	Mean	SD	Min	Max
Ke	0.091	0.053	0.005	0.375	0.085	0.051	0.005	0.375	0.117	0.107	0.005	0.375
CPCN	0.356	0.478	0.000	1.000	0.416	0.386	0.000	1.000	0.317	0.363	0.000	1.000
CoL	0.467	0.238	0.120	0.890	0.452	0.227	0.091	0.890	0.485	0.235	0.135	0.890
AGE	34.426	18.337	8.340	94.00	33.00	17.20	8.450	94.00	38.00	18.00	8.340	94.00
PRF	0.021	0.032	-0.093	0.382	0.023	0.041	-0.093	0.365	0.020	0.037	-0.093	0.378
CFO	0.060	0.137	0.011	0.256	0.064	0.108	0.011	0.256	0.061	0.127	0.011	0.256
SZ	7.004	0.775	5.730	8.680	7.038	0.681	5.730	8.680	6.953	0.801	5.730	8.680
Obs.	4500				2520				1980			
Note: This table provides the summary statistics for the entire sample, agriculture allied and other non-financial connected firms which include mean= average values of variables, SD= standard deviation of data set, Min= minimum value, Max= maximum value, Ke= cost of equity, CPCN= corporate political connections, CoL= collateral of firm, AGE= firm age, PRF= profitability, CFO= cash flow from the operation, SZ= size of a firm and Obs= number of observations.												

In Table 2, the summary statistics are detailed. The average values of the cost of equity of the overall sample, agriculture allied, and other non-financial firms, show that firms in Pakistan have to bear a small cost on their equity investment with a small deviation in values. It means that firms obtained their equity financing easily from investors due to political connections. Moreover, investors are willing to obtain a lower rate of return from a politically connected firm because of security and minimal default risk. We use the dummy variable and assigned '1' for politically connected firms and '0' for non-connected firms. The agriculture allied firms have more connections than other non-financial firms. The value of collateral shows that the firm invests more in the fixed assets for safe investment; attracting investors and generating more revenue. The small variation in the values of collateral shows that firms are consistent in acquiring fixed assets. The average age of politically connected firms is 34 years in the entire sample, which shows that politically connected firms perform for a long time and that connection increases the confidence of investors.

The average profits of politically connected firms in Pakistan show that firms need to utilize their assets efficiently to generate more profit. Low profit may be because firms have to pay more in wages because of the involvement of politicians in the firms' operations. However, the average profit is greater in agriculture allied firms as compared to other non-financial firms because they have more connections with government

officials and politicians. Cash flows of the firms have very small average values indicating that firms generate low cash through their operations. However, the small variation in the value of cash flow shows that the flow of money is consistent. It means that firms perform their routine matters efficiently. The small deviation in the value of firm size shows the consistency in the increase of total assets of a firm. This means that firms are keen to expand their operations by spending more money on total assets. The value of firm size shows less variation and more consistency towards spending of money on total assets. It means that firms are keen to survive, so spend more money to increase their total assets.

The test of variance inflation factor (VIF) is used to find the problem of multicollinearity in our model. If the value of VIF is between 1-3 then no multicollinearity exists (Carney et al., 2002). Table 3 provides information about the correlation and multicollinearity among variables. The first two columns in table 3 show the values of the VIF.

Table 3: Multicollinearity diagnostics and Correlation matrix									
	VIF	1/VIF	Ke	CPS	CoL	AGE	PRF	CFO	SZ
Ke	--	--	1						
CPCN	2.13	0.469	-0.045	1					
CoL	2.06	0.485	-0.089	0.194	1				
AGE	1.93	0.518	-0.027	0.087	0.136	1			
PRF	1.78	0.562	0.016	0.142	0.038	0.011	1		
CFO	1.43	0.699	-0.019	0.239	0.093	0.105	0.036	1	
SZ	1.48	0.676	-0.012	0.056	0.123	0.031	0.033	0.013	1

Note: Ke= cost of equity, CPCN= corporate political connections, CoL= collateral of firm, AGE= firm age, PRF= profitability, CFO= cash flow from operation, SZ= size of firm.

Table 3 further explains the correlation among the explanatory variables of our study. We do not find high values of correlation which indicates that there is no problem of multicollinearity in the model.

Table 4 represents the effects of corporate political connections on the cost of equity with the help of a system dynamic regression. We applied the GMM approach for testing hypotheses.

Table 4: System dynamic Panel Regression						
DV=Ke						
	Full sample		Agriculture allied		Other Non-financial	
Variables	1	2	3	4	5	6
L-1	0.325*** (0.009)	--	0.238*** (0.008)	--	0.207*** -0.0058	--
CPCN	-0.217*** (0.039)	0.128*** (0.028)	-0.237*** (0.067)	-0.183*** (0.031)	-0.172*** (0.013)	-0.114*** (0.021)
CoL	-0.093** (0.017)	0.074*** (0.024)	-0.115*** (0.012)	-0.01*** (0.005)	-0.085** (0.015)	-0.067*** (0.007)
AGE	-0.008*** (0.001)	0.0065** (0.003)	-0.0087** (0.004)	-0.0012*** (0.0004)	-0.006* (0.003)	-0.0047*** (0.0014)
PRF	-0.137*** (0.016)	0.107*** (0.013)	-0.114*** (0.032)	-0.126*** (0.027)	-0.218 (0.017)	-0.013*** (0.019)
CFO	-0.085 (0.026)	0.034** (0.06)	-0.125*** (0.06)	-0.087*** (0.036)	-0.074*** (0.024)	0.037* (0.006)
SZ	-0.207*** (0.019)	0.011*** (0.003)	-0.086*** (0.027)	-0.079*** (0.004)	-0.103*** (0.026)	-0.021** (0.005)
Estimator	GMM	FEM	GMM	FEM	GMM	FEM
Year Dummy	Yes	Yes	Yes	Yes	Yes	Yes
Sargan Test	150.361	--	119.433	--	105.838	--
p-value	0.473	--	0.518	--	0.325	--
AR ₁	-6.819***	--	-4.616***	--	-4.027***	
AR ₂	1.372	--	0.735	--	1.642	--
F-stat	--	10.182***		11.587***		8.075***
H-test	--	8.489***	--	9.576***	--	6.417***
Adj. R ²	--	0.348	--	0.372	--	0.304
Obs.	1890		1206		684	

Note: Ke is the cost of equity, L-1 is the lag value of Ke, CPCN= corporate political connections, CoL= collateral of firm, AGE= age of the firm, PRF= profitability, CFO= cash flow from operations, SZ= size of the firm, AR₁ & AR₂ describe first order & second-order autocorrelation, H-test= Hausman test (P-value is significant so use the FEM), Odd columns i.e. 1, 3 & 5 represent the estimation results through GMM whereas even columns i.e. 2, 4 & 6 show estimation result through FEM for robustness. Columns 1 & 2 represent the results of the full sample data set, Columns 3 & 4 describe the results of agriculture allied connected firms, Columns 5 & 6 report the results of other non-financial firms. Beta coefficients from FEM are measured with robust (HAC) standard errors. The standard error is shown in brackets below the beta coefficient of each variable. Obs. = total number of observations, ***, **, * denote the significance level at 1%, 5%, & 10%, respectively.

Table 4 shows the impact of corporate political connections on the cost of equity, we used the Sargan test for instrument validity. The p-value of the Sargan test is insignificant which shows that the instruments are valid. Moreover, the results of AR1 reveal a significant p-value, and AR2 has an insignificant p-value which indicates that no autocorrelation exists. We find that firms use corporate political strategies in the form of political connections to obtain equity financing at a low cost. Investors prefer to invest in politically connected firms as they have less risk of default. Moreover, investors view political connections positively, as reflected in a lower cost of equity. The findings are following Phan et al. (2020), who explained that investors perceive those firms that use corporate political strategies are less risky than non-connected firms. Our results also reveal that the percentage of connections of agriculture allied firms is greater than that of other non-financial firms in Pakistan. The results also show that the political connection of the firms in agriculture allied and other non-financial sectors have a significant negative impact on the cost of equity, which means that they generate finance at a low cost. Our results are consistent with Boubakri et al. (2012); Saeed et al. (2019) and Phan et al. (2020), who find that politically connected firms derive benefits by obtaining equity financing at a low cost.

Additionally, we find that firms' collaterals have a negative association with the cost of equity, which means spending on fixed assets increases the confidence of investors and leads to an increase in the investment at a low rate of return. The findings are in line with the study of Charumilind et al. (2006). The results further show that when firms age, they obtain equity finance more easily at a low cost. Besides, the results indicate that profitability has a negative impact on the cost of equity. The reasons for the negative impact may be that profitable politically connected firms attract investors and obtain equity financing at a low cost. According to Gray et al. (2016), profitability has a negative impact on the cost of equity. Moreover, our findings reveal that an increase in cash flow from operations leads to a decrease in their cost of equity. This negative impact is in line with the findings of Hashmi et al. (2018). Our results demonstrate that politically connected firms with large size have a lower cost of equity financing, consistent with the work of Claessens et al. (2008), find that large politically connected

firms have more diversified activities, better disclosures, less risk to default, and consequently lower cost of equity financing.

Table 5 represents the impact of connected firms affiliated with large business groups and other stand-alone firms on the cost of equity financing. The results reveal that the firms having affiliation with large business groups bear less cost to obtain the equity investment than the stand-alone connected firms.

Table 5: System Dynamic Panel Regression (BGA vs SA)				
DV= Ke				
Variables	BGA		SA	
	1	2	3	4
L-1	0.257*** (0.004)		0.331*** (0.007)	--
CPCN*BGA	-0.153*** (0.012)	-0.096*** (0.03)	--	--
CPCN*SA	--	--	-0.093** (0.007)	-0.073*** (0.009)
CoL	-0.031*** (0.009)	-0.103*** (0.027)	-0.051*** (0.004)	-0.056*** (0.045)
AGE	-0.071*** (0.011)	-0.069*** (0.003)	-0.010*** (0.002)	-0.0016** (0.0008)
PRF	-0.126*** (0.008)	-0.097*** (0.018)	-0.011* (0.0013)	-0.016*** (0.031)
CFO	-0.082** (0.005)	0.049** (0.0041)	-0.079*** (0.003)	0.071*** (0.023)
SZ	-0.031** (0.0013)	-0.073** (0.011)	-0.012*** (0.0021)	0.023*** (0.006)
Estimator	GMM	FEM	GMM	FEM
Year Dummy	Yes	Yes	Yes	Yes
Sargan Test	34.784	--	60.593	--
P-Value	0.735	--	0.937	--
AR ₁	-2.526***		-3.339***	
AR ₂	1.273	--	1.682	--
F-stat	--	11.903***		8.175***
H-test	--	7.897***	--	5.446***
Adj. R ²	--	0.371	--	0.310
No. of Obs.	738		1152	

Note: Ke is the cost of equity, L-1 is the lag value Ke, CPCN*BGA=interaction with corporate political connections and business group affiliation, CPS*SA=interaction with corporate political

*connections and stand-alone firms, BGA=business group affiliation, SA=stand-alone firms, CoL= collateral of firm, AGE= age of the firm, PRF= profitability, CFO= cash flow from operations, SZ= size of the firm, AR₁ & AR₂ describe first order & second-order autocorrelation, H-test= Hausman test (P-value is significant so use the FEM), Odd columns i.e. 1 & 3 represent the estimation results through GMM whereas even columns i.e. 2 & 4 show estimation result through FEM for robustness. Column 1 & 2 represent the results of a large business group affiliated connected firms, Column 3 & 4 describe the results of stand-alone connected firms, Beta coefficients from FEM are measured with robust (HAC) standard errors. In the table standard error is shown in brackets below the beta coefficient of each variable. Obs. = total number of observations, ***, **, * denote the significance level at 1%, 5%, & 10%, respectively.*

Our findings presented in Table 5 are consistent with Muttakin et al. (2015), who establish that stand-alone firms have less association with the cost of equity finance than affiliated firms with large business groups. Importantly, our results infer that firms' affiliation with groups increases the value of their political connections confirms our second hypothesis, which states that large business group affiliated connected firms negatively affect the cost of equity. Large business groups in Pakistan are the main conduit through which money is circulated, and only a few families have control over the major business groups. So, firms affiliated with these groups obtained benefits through easy access to finance at a low cost. Because the firms affiliated with large business groups can identify with these groups, they can easily obtain equity financing at a low cost. We also find that the large business group affiliated firms have more connections with politicians than stand-alone firms. Group affiliation increases the impact of political connections in terms of easy access to equity finance. Our research also reveals that because of the weak law and enforcement system and undeveloped financial intermediaries in Pakistan, affiliation with large business groups helps firms to reduce their financial constraints. These results are consistent with previous studies by Ma et al. (2006); Yu et al. (2009) and Phan et al. (2020), who find that politically connected firms affiliated with large business groups derive benefits in the form of a lower cost of equity financing than stand-alone firms.

5. CONCLUSION

Our research aims to examine the impact of corporate political connections on the cost of equity of non-financial firms listed in the PSX. The results of our study show

the firms that use corporate political connections have a low cost of equity. The results also show that the connections of agriculture allied firms are greater than those of other non-financial firms. Thus, both of our hypotheses 1 (Corporate political connections have a negative impact on the cost of equity of the firm) and 2 (Large business group affiliated connected firms negatively affect the cost of equity of the firm) are confirmed.

The investors provide more attention to invest in politically connected firms due to less risk to default. We further find that the cost of equity is especially low for those politically connected firms, having strong ties with politicians and large business groups. Our research also reveals that politically connected firms have easy access to external finance at a low cost. This means that investors prefer to invest in politically connected firms and their easy access to finance helps the firms to obtain more equity financing.

Our study is limited to Pakistan; however, it can be extended, particularly to other South-Asian countries, by comparing the data from other developing countries. Our research may be further extended to check the impact of corporate political connections on financial constraints faced by different firms.

These findings are useful for investors of the firms and regulators. Our study provides guidelines to current and potential investors - that investing in politically connected firms is more secure. Politically connected firms have a low cost of equity due to having more financing opportunities because when politicians are on the board of directors, they may have more influence in the equity market, hence they generate more equity financing at a low cost to be available. However, investors should also be aware when deciding to invest in politically connected firms as these firms may have lower profits due to higher wage expenses. Further, these firms rely more on debt and may face financial distress. This study suggests regulators should oversee the activities of politically connected firms to strengthen those businesses. The regulators of the stock exchange may provide equal rights to non-politically connected firms to improve their access to more financing at a lower cost. Our results also can help the management of politically connected firms while taking their financing decisions.

Appendix A

Business Groups	Public Office Holder	Tenure
Saifullah Business Group	Federal Minister	2002
Choudhry Group of Business	Federal Minister	2002
Riaz Bottlers	Minister of Trade and commerce	2002
Kohstan Transport	Member of National Assembly	2002
JDW Group of Companies	Federal Minister	2004
Service Group	Minister of Water & Power	2008
Zardari Group	President	2009
Ittefaq Foundries	Prime Minister	2012
Dewan Group	Minister of local Bodies	2015

REFERENCES

- Adhikari, A., Derashid, C., & Zhang, H. (2006). Public policy, political connections, and effective tax rates: Longitudinal evidence from Malaysia. *Journal of Accounting and Public Policy*, 25(5), 574-595.
- Aggarwal, R. K., Meschke, F., & Wang, T. Y. (2012). Corporate political donations: investment or agency? *Journal of Business and Politics*, 14.
- Amanat, A., Hunjra, A. I., & Ahmed, F. (2020). How Corporate Political Strategies Are Related to Cost of Debt?. *Indonesian Capital Market Review*, 12, 85-92.
- Andreasson, P., Bekiros, S., Nguyen, D. K., & Uddin, G. S. (2016). Impact of speculation and economic uncertainty on commodity markets. *International Review of Financial Analysis*, 43, 115-127.
- Anwar, Z., Khan, M. K., & Danish, R. Q. (2019). Corporate Governance and Cost of Equity: Evidence from Asian Countries. *Journal of Political Studies*, 26(1).
- Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The review of economic studies*, 58(2), 277-297.
- Arellano, M., & Bover, O. (1995). Another look at the instrumental variable estimation of error components models. *Journal of econometrics*, 68(1), 29-51.
- Arslan, M., & Abidin, S. (2019). Nexus between corporate governance practices and cost of capital in PSX listed firms. *Cogent Economics & Finance*, 7(1), 1600222.
- Ashraf, J., & Ghani, W. I. (2005). Accounting development in Pakistan. *The International Journal of Accounting*, 40(2), 175-201.
- Blau, B. M., Brough, T. J., & Thomas, D. W. (2013). Corporate lobbying, political connections, and the bailout of banks. *Journal of Banking & Finance*, 37(8), 3007-3017.
- Boubakri, N., Cosset, J. C., & Saffar, W. (2012). The Impact of Political Connections on Firms' operating Performance and Financing Decisions. *Journal of Financial Research*, 35(3), 397-423.
- Bozec, Y., & Bozec, R. (2011). Corporate governance quality and the cost of capital. *International Journal of Corporate Governance*, 2(3-4), 217-236.

- Bunkanwanicha, P., & Wiwattanakantang, Y. (2009). Big business owners in politics. *The Review of Financial Studies*, 22(6), 2133-2168.
- Carney, M., Gedajlovic, E. R., Heugens, P. P., Van Essen, M., & Van Oosterhout, J. (2011). Business group affiliation, performance, context, and strategy: A meta-analysis. *Academy of Management Journal*, 54(3), 437-460.
- Chaney, P. K., Faccio, M., & Parsley, D. (2011). The quality of accounting information in politically connected firms. *Journal of Accounting and Economics*, 51(1-2), 58-76.
- Charumilind, C., Kali, R., & Wiwattanakantang, Y. (2006). Connected lending: Thailand before the financial crisis. *The Journal of Business*, 79(1), 181-218.
- Cheng, L., Cheng, H., & Zhuang, Z. (2019). Political connections, corporate innovation and entrepreneurship: Evidence from the China Employer-Employee Survey (CEES). *China Economic Review*, 54, 286-305.
- Claessens, S., Feijen, E., & Laeven, L. (2008). Political connections and preferential access to finance: The role of campaign contributions. *Journal of financial economics*, 88(3), 554-580.
- Cooper, M. J., Gulen, H., & Ovtchinnikov, A. V. (2010). Corporate political contributions and stock returns. *The Journal of Finance*, 65(2), 687-724.
- Correia, M. M. (2014). Political connections and SEC enforcement. *Journal of Accounting and Economics*, 57(2-3), 241-262.
- Craney, T. A., & Surles, J. G. (2002). Model-dependent variance inflation factor cutoff values. *Quality Engineering*, 14(3), 391-403.
- Dakhlaoui, M., & Gana, M. R. (2020). Ownership structure and cost of equity capital: Tunisian evidence. *International Journal of Business Governance and Ethics*, 14(1), 96-121.
- Desai, R. M., & Olofsgard, A. (2011). The costs of political influence: Firm-level evidence from developing countries. *Quarterly Journal of Political Science*, 6(2), 137-178.
- Djankov, S., Hart, O., McLiesh, C., & Shleifer, A. (2008). Debt enforcement around the world. *Journal of political economy*, 116(6), 1105-1149.
- Faccio, M. (2006). Politically connected firms. *American economic review*, 96(1), 369-386.
- Faccio, M. (2010). Differences between politically connected and non-connected firms: A cross-country analysis. *Financial management*, 39(3), 905-928.
- Fisman, R. (2001). Estimating the value of political connections. *American economic review*, 91(4), 1095-1102.
- Gao, W., Huang, Z., & Yang, P. (2019). Political connections, corporate governance and M&A performance: Evidence from Chinese family firms. *Research in International Business and Finance*, 50, 38-53.
- Goldman, E., Rocholl, J., & So, J. (2009). Do politically connected boards affect firm value?. *The Review of Financial Studies*, 22(6), 2331-2360.
- Gray, S., Harymawan, I., & Nowland, J. (2016). Political and government connections on corporate boards in Australia: Good for business?. *Australian Journal of Management*, 41(1), 3-26.
- Hashmi, M. A., Brahmana, R. K., & Lau, E. (2018). Political connections, family firms and earnings quality. *Management Research Review*, 41, 414-432.
- He, Y., Xu, L., & McIver, R. P. (2019). How does political connection affect firm financial distress and resolution in China?. *Applied Economics*, 51(26), 2770-2792.
- Hillman, A. J., & Hitt, M. A. (1999). Corporate political strategy formulation: A model of approach, participation, and strategy decisions. *Academy of management review*, 24(4), 825-842.

- Hossain, A. T., & Kryzanowski, L. (2020). *Political Corruption and Cost of Equity. Business & Society*, 0007650320928502.
- Houston, J. F., Jiang, L., Lin, C., & Ma, Y. (2014). *Political connections and the cost of bank loans. Journal of Accounting Research*, 52(1), 193-243.
- Hunjra, A. I., Mehmood, R., & Tayachi, T. (2020). *How Do Corporate Social Responsibility and Corporate Governance Affect Stock Price Crash Risk?. Journal of Risk and Financial Management*, 13(2), 30.
- Jawaid, S. A. R. S. T., Arif, I., & Qazi, F. (2011). *Validity of capital asset pricing model in Pakistan: Evidence from Karachi Stock Exchange. African Journal of Business Management*, 5(32), 12598-12605.
- Joni, J., Ahmed, K., & Hamilton, J. (2020). *Politically connected boards, family and business group affiliations, and cost of capital: Evidence from Indonesia. The British Accounting Review*, 52(3), 100878.
- Khan, M. Y. (2016). *Corporate governance and cost of capital: Evidence from Pakistani listed firms (Doctoral dissertation, University of Glasgow)*.
- Khanna, T., & Yafeh, Y. (2007). *Business groups in emerging markets: Paragons or parasites?. Journal of Economic Literature*, 45(2), 331-372.
- Khwaja, A. I., & Mian, A. (2005). *Do lenders favor politically connected firms? Rent provision in an emerging financial market. The Quarterly Journal of Economics*, 120(4), 1371-1411.
- Kim, C., Kim, I., Pantzalis, C., & Park, J. C. (2019). *Policy uncertainty and the dual role of corporate political strategies. Financial Management*, 48(2), 473-504.
- Klarin, A., & Ray, P. K. (2019). *Political connections and strategic choices of emerging market firms. International Journal of Emerging Markets*, 14(3), 410-435.
- Krammer, S. M., & Jimenez, A. (2020). *Do political connections matter for firm innovation? Evidence from emerging markets in Central Asia and Eastern Europe. Technological Forecasting and Social Change*, 151, 119669.
- Li, G., & Zhou, H. (2015). *Political connections and access to IPO markets in China. China Economic Review*, 33, 76-93.
- Liu, C., & Zhang, Y. (2019). *Religiosity and political connections of private firms in China. Emerging Markets Finance and Trade*, 1-21.
- Ma, X., Yao, X., & Xu, Y. (2006). *Business group affiliation and firm performance in a transition economy: A focus on ownership voids. Asia Pacific Journal of Management*, 23(4), 467-483.
- Morck, R., & Yeung, B. (2003). *Agency problems in large family business groups. Entrepreneurship theory and practice*, 27(4), 367-382.
- Muttakin, M. B., Mihret, D. G., & Khan, A. (2018). *Corporate political connection and corporate social responsibility disclosures. Accounting, Auditing & Accountability Journal*, 31, 725-744.
- Nahar, S., Azim, M., & Jubb, C. A. (2016). *Risk disclosure, cost of capital and bank performance. International Journal of Accounting & Information Management*, 24, 476-494.
- Nosheen, S., & Sajjad, M. F. (2018). *Corporate Governance, Disclosure Quality, and Cost of Equity: evidence from Pakistan. The Lahore Journal of Business*, 6, 63-91.
- Pham, A. V. (2019). *Political risk and cost of equity: The mediating role of political connections. Journal of Corporate Finance*, 56, 64-87.
- Phan, D. H. B., Tee, C. M., & Tran, V. T. (2020). *Do different types of political connections affect corporate investments? Evidence from Malaysia. Emerging*

- Markets Review*, 42, 100667.
- Rehman, U. (2006). *Who Owns Pakistan, Fluctuating Fortunes of Business Moghuls*, Aekia Communications, Islamabad
- Saeed, A., Belghitar, Y., & Clark, E. (2019). *Political connections and corporate performance: Evidence from Pakistan*. *Economics of Transition and Institutional Change*, 27(4), 863-889.
- Sharma, P., Cheng, L. T., & Leung, T. Y. (2020). *Impact of political connections on Chinese export firms' performance—Lessons for other emerging markets*. *Journal of Business Research*, 106, 24-34.
- Silva, J. C. D., Xavier, W. G., Gambirage, C., & Camilo, S. P. O. (2018). *The influence of political connections on the cost of capital and the performance of companies listed on B3. BBR*. *Brazilian Business Review*, 15(4), 317-330.
- Su, Z. Q., Xiao, Z., & Yu, L. (2019). *Do political connections enhance or impede corporate innovation?*. *International Review of Economics & Finance*, 63, 94-110.
- Tee, C. M. (2020). *Political connections and income smoothing: Evidence of institutional investors' monitoring in Malaysia*. *Journal of Multinational Financial Management*, 100626.
- Tihanyi, L., Aguilera, R. V., Heugens, P., van Essen, M., Sauerwald, S., Duran, P., & Turtorea, R. (2019). *State ownership and political connections*. *Journal of Management*, 45(6), 2293-2321.
- Titman, S., & Wessels, R. (1988). *The determinants of capital structure choice*. *The Journal of Finance*, 43(1), 1-19.
- Tsai, L. C., Zhang, R., & Zhao, C. (2019). *Political connections, network centrality and firm innovation*. *Finance Research Letters*, 28, 180-184.
- Wang, Y., Yao, C., & Kang, D. (2019). *Political connections and firm performance: Evidence from government officials' site visits*. *Pacific-basin finance journal*, 57, 101021.
- Wong, W. Y., & Hooy, C. W. (2018). *Do types of political connections affect firm performance differently?*. *Pacific-Basin Finance Journal*, 51, 297-317.
- Wu, W., Wu, C., Zhou, C., & Wu, J. (2012). *Political connections, tax benefits and firm performance: Evidence from China*. *Journal of Accounting and Public policy*, 31(3), 277-300.
- Yu, H., Van Ees, H., & Lensink, R. (2009). *Does group affiliation improve firm performance? The case of Chinese state-owned firms*. *The Journal of Development Studies*, 45(10), 1615-1632.
- Zhang, J., Li, X., Fung, H. G., & Qiao, P. (2019). *Do political connections promote innovation in environmentally polluting enterprises?* *China & World Economy*, 27(3), 76-101.
- Woodman, R. W., Sawyer, J. E., & Griffin, R. W. (1993). *Toward a theory of organizational creativity*. *Academy of management review*, 18(2), 293-321.
- Wright, T. A. (2017). *Seligman's positive psychology. The handbook of stress and health: A guide to research practice*, 415-426.
- Xiao, J. (1996). *The relationship between organizational factors and the transfer of training in the electronics industry in Shenzhen, China*. *Human resource development quarterly*, 7(1), 55-73.
- Yaghi, A., & Bates, R. *The role of supervisor and peer support in training transfer in institutions of higher education*. *International Journal of Training Development*
- Yaghi, A., & Bates, R. (2020). *The role of supervisor and peer support in training transfer*

- in institutions of higher education. International Journal of Training and development psychopathology, 24(2), 89-104.*
- York, R., & Dunlap, R. E. (2019). *Environmental sociology. The Wiley Blackwell Companion to Sociology*, 283-300.
- Zhu, X., et al. (2020). *Healthy workplaces, active employees: A systematic literature review on impacts of workplace environments on employees' physical activity and sedentary behavior. Building and Environment, 168, 106455.*