

## OWNERSHIP STRUCTURE, POLITICAL CONNECTIONS AND INVESTMENT IN FAMILY FIRMS

**Noor Ul Ain Khan**

Lecturer University of Chakwal & PhD Scholar Faculty of management sciences, University of Central Punjab, Lahore.

**Dr. Snober Javid**

Assistant professor, Faculty of management sciences, University of Central Punjab, Lahore.

### ABSTRACT

This quantitative research aims to address the role of ownership structure in a Firm's financial decisions. Moreover, it studies the moderation of political connections between the ownership structure and investment decisions. The research model has been guided by the Socioemotional wealth view wherein ownership structure has been taken as an exogenous variable. In contrast, Investment decisions have been taken as an endogenous variable. For this, 402 non-financial companies in the Pakistan stock exchange have been targeted. The data ranges from 2010 to 2019. Moreover, this data has been analyzed with the Generalized Method of Moments approach. According to the results, family-owned firms make better investment decisions than non-family firms. Notably, political connectivity moderates this relationship. These findings contribute to theory and practice. This research is limited to a single financial decision, i.e., an investment decision; however, future research may be targeted to other financial decisions, such as financing and dividend payout.

### ARTICLE INFO

*Keywords:*

Family firms, Political connection, investment decision,

*Article History:*

Received: 7<sup>th</sup> Oct 2022

Accepted: 29<sup>th</sup> Nov 2022

Published: 15<sup>th</sup> Dec 2022

© 2020 The authors. Published by CADDO GAP Press USA. This is an open access article under the Creative Commons Attribution Non Commercial 4.0

### 1. INTRODUCTION

For three decades, research on family firms has gained attention from international scholars (Araya-Castillo et al., 2022). It has been observed that family firms have better performance relative to non-family firms (Dyer, 2018). This superior performance is credited to fewer conflicts of interest, minimum turnover, lesser external pressure and a more compelling investment pattern (Pedersen-Bjergaard & Dalby, 2018). In contrast, family businesses underperform as compared to non-family firms. This competitive disadvantage is debited to lesser control and private benefit orientation (Abrardi & Rondi, 2020). The conflict between competitive advantage and disadvantage exists and is still questionable.

The link between the corporate and political systems is a global phenomenon (Qian & Chen, 2021). Although these connections are found in developed and developing countries, such relations are deeply rooted in developing countries (Shoukat, 2020). Broadly, promoting political connection has encouraged "individual initiative and private entrepreneurship at every level of industrialization" (Harymawan et al., 2017). Individual and family enterprises tend to gain benefits from such a connection.

So far as investment decisions are concerned, family firms have better firm-specific information and more extended investment plans and become less shortsighted and make wise investment decisions. Chami (2001)

argued that family firms tend to consider their companies as assets passed onto their descendants instead of a source of money to consume during their lifetimes. Therefore, the foundation families' primary priority is the longevity and sustainability of their company, where they make long-term value maximization decisions.

### 2. RESEARCH PROBLEM

Government policies often have significant effects on the firm's value. Therefore, it is unsurprising that the firms have adopted several strategies to cultivate a relationship with government officials. Such strategies may include campaign contributions, lobbying efforts, and engaging politicians to serve on their Board of directors (Houston et al., 2012). Although political connection is pertinent to countries worldwide, it remains widely argued that the prevalence of political connection is considerably higher amongst developing countries with relationship-based financial systems (Desai & Olofgard, 2011).

Pakistan is located in the South Asian region and is characterized as politically unstable, with a weak socio-economic structure. There are a few laws concerning conflict of interest; governance mechanisms are inefficient, and rule of law remains poor (Constable 2001). Transparency International (2014) consistently ranks Pakistan among highly corrupt countries worldwide.

Evidence on Pakistan's corporate structure strongly suggests a ubiquity of firms with a controlling shareholder, often in the family. For example, a study by Tahir, Sabir and Shah (2016) stated that family business comprises nearly 70% of existing businesses. Moreover, these families have political connections, either directly involved in government or indirectly having friendship ties.

According to Azila-Gbettor et al. (2018), earlier studies on family ownership have produced mixed results regarding performance and corporate financial decisions. The interest in family business research is proliferating, but the area of financial decision-making is underestimated. Investment decisions and dividend policies are also left uncovered (Motylska-Kuzma, 2017). Only one study takes family ownership and political connections as variables in Pakistan (Hashmi et al., 2018).

This study studies the moderating role of political connections for ownership structure as a family or non-family and investment policy.

#### *Objectives of the Study*

- i. To measure the relationship between family ownership and investment decision considering the moderating role of political connections.
- ii. To measure the relationship between family ownership and investment decision considering the moderating role of political connections while taking into account the generational aspect.

This paper, however, contributes to the theory in three ways. Firstly, it enhances the understanding of managerial investment decisions in the family firms concerning Pakistan. Secondly, it clarifies the impact of ownership structure on the investment decision. Lastly, it provides empirical evidence of political connections' contribution to the investment decision.

### 3. LITERATURE REVIEW

This study stands on the socioemotional wealth concept (Berrone et al., 2012) wherein it has been argued that family businesses have non-economic goals that influence their strictly economic goals (Berrone et al., 2012). It is proposed that family businesses make decisions to safeguard their socioemotional riches, even if these actions result in financial losses (Berrone et al., 2012). In short, socioemotional wealth clarifies the behaviour of family firms.

#### *Investment Decisions in Family Firms*

Family firms have almost the same level of investment as non-family firms (Anders et al., 2012). However, Astrachan and Zellweger (2008) suggested that family firms have a natural advantage in investing in long-run projects due to a lower information asymmetry between managers and investors. Zellweger (2007) found that

family firms display longer time horizons due to the transgenerational goal, a longer CEO tenure, and many family firms in cyclical industries, which can inhibit short-term success. In addition, empirical research has shown that family businesses tend to underinvest in R&D relative to non-family firms (Chrisman & Patel, 2012; Muñoz-Bullion & Sanchez-Bueno, 2011). Still, Chrisman and Patel (2012) show that family firms increase their R&D investments when their performance falls below that of competitors. In such a situation, family businesses tend to be relatively less risk-averse than non-family firms.

The prior family business literature needs to provide more insight regarding family ownership and its effect on investment cash flow sensitivity, particularly in Asia. This phenomenon still needs to be explained about whether family ownership increases or decreases the investment-internal fund sensitivity. The previously available research studies' conclusions show mixed results (Gugler et al., 2003). The large proposition of new investment spending in family corporations heavily depends upon internal funds in Continental Europe. On the other hand, some authors from East Asia and Italy show that family ownership mitigates the linkage between investment and internal funds (Tahir, 2014). However, in Pakistan, efforts are needed to explore this phenomenon.

### *Contextualizing Political connections in Pakistan*

Firms with political ties have been deep-rooted in Pakistan. The industrial policy in Pakistan in the early years aimed to encourage "individual initiative and private entrepreneurship at every level of industrialization" (Harymawan et al., 2017). In the 1960s, military ruler Mohammad Ayub Khan advocated for expanding family-owned enterprises as a means of economic development (Arora & Bodhanwala, 2018). Immigrant merchants benefited greatly from such a mentality; despite constituting just 0.5 per cent of the population, the Punjabi Chiniotis and the immigrant Memon, Bohra, and Khoja tribes from the districts surrounding Bombay accumulated half of the industrial wealth under Ayub's reign.

During a Pakistan Management Association conference in 1968, Mahbub-ul-Huq, the Planning Commission's senior economist, declared that 66 per cent of the country's total industrial capital was concentrated in the hands of twenty families. "The same twenty families controlled 80% of banking and 97% of insurance in the country" (Arora & Bodhanwala, 2018). Hence, the tenancy of political connectivity has a history and such connection are found in great intensity.

### *Political Connections and Investment Decisions*

Political connections and financial decisions are interlinked. For instance, a study by Chen et al. (2011) found that political connections significantly reduce investment efficiency in state-owned enterprises. Another study by Xu et al., (2011) investigates the investment behaviour of family firms and the effects of these firms' political connectedness on their investments in a relationship-based economy. Consistent with previous evidence, they found that Chinese family firms have difficulty in financing and that the political connectedness of family firms can help mitigate the cash flow in-sensitivity problem.

Keeping in view the arguments, it is expected that the family firms show lower investment cash flow sensitivity than their counterparts. Therefore, the study proposes the following hypothesis:

**H1:** The investment cash flow sensitivity is lower in family businesses considering the moderating role of political connections.

$$\text{Investment}_{it} = \alpha + \lambda \text{Investment}_{it-1} + (\beta + \gamma \text{OWN}_{it}) \text{X} (\text{PCONN}_{it}) + \eta \text{X}_{it} + \varepsilon_{it}$$

Previous literature on finance reveals that family-owned business (FOB) strongly believes in the pecking order theory to finance their projects. FOBs prefer internal financing with a lower cost of capital and tempt to pass their business to descendants with capital efficiency. Also, family involvement is generally linked with lower agency problems due to the overlapping management with ownership. Chrisman et al. (2004) indicate that companies with founding family CEOs could easily access external financing because of lower agency problems.

The following hypothesis is proposed:

**H2:** The lower investment-cash flow sensitivity in a family business is due to the family corporation where the family succeeding generation exists, considering the moderating role of political connections.

$$\text{Investment}_{it} = \alpha + \lambda \text{Investment}_{it-1} + (\beta + \gamma \text{OWN}_{it} + \theta \text{GEN}_{it}) \times (\text{PCONN}_{it}) + \eta X_{it} + \varepsilon_{it}$$

### ***Ownership Control and Investment Decision***

The structure of ownership contributes to investment policy (He & Kyaw, 2018). The prior family business literature hardly provides any insight regarding family ownership and its effect on investment cash flow sensitivity, particularly in Pakistan. This phenomenon still needs to be addressed whether family ownership increases or decreases the level of investment. The previously available research studies' conclusions show mixed results (Gugler et al., 2003). The significant proposition of new investment spending in family corporations heavily depends upon internal funds in Continental Europe. On the other hand, some authors from East Asia and Italy show that family ownership mitigates the linkage between investment and internal funds (Tahir, 2014).

A study by Chen et al. (2011) found that political connections significantly reduce the level of investment in state-owned enterprises. In this stance, it is assumed that family firms' investment decisions are different from non-family firms and being politically connected, the investment decisions can be distorted. Therefore, the study proposes the following hypothesis:

**H3:** Political connections moderates the relationship between family ownership and level of investment.

$$\text{Investment}_{it} = \alpha + \beta_1 \text{Investment}_{it-1} + \beta_2 \text{Family}_{it} \times (\beta_3 \text{PCONN}_{it}) + \beta_4 \text{TobinQ}_{it-1} + \eta X_{it} + \varepsilon_{it}$$

## **4. RESEARCH METHODOLOGY**

In this quantitative research, all listed companies of the non-financial sector of Pakistan have been considered. As for the balance sheet analysis 2018 of non-financial joint stock corporations published by the State Bank of Pakistan, there are 402 non-financial companies listed on the Pakistan stock exchange. The secondary data has been extracted from annual reports for the periods ranging from 2010 to 2019.

This collected data was passed through initial screening, wherein outliers and missing figures were treated accordingly. Afterwards, it was analyzed using statistical tests, including descriptive, correlation and regression analysis. In particular, the Generalized Method of Moments (GMM) approach has been used. This approach uses a dynamic predictor wherein heteroscedasticity is reduced, and serial correlation is established.

## **5. RESULTS AND DISCUSSION**

Descriptive statistics is a fundamental part of the data analysis phase, which assists in exhibiting dataset patterns and trends in a single phrase (Kaur et al., 2018). Table 1 depicts the descriptive analysis of the variable. The total number of observations used in the study was 1890. The variables used are political connections (PC), family ownership (OWN), firm Age (FAGE), gender (GEN), accounts receivable (AR), tangibility (TANG), firm's growth (GROWTH), firm size (FS) and the interaction term (PCOWN). The mean calculated for PC is 0.142, Std Dev. is 0.349, and the variance is 0.349. In contrast, skewness is recorded as 2.054, whereas Kurtosis is 5.217. The mean value of OWN is 0.512, Std. Dev. is 0.499, and the variance is 0.249. Skewness is recorded to be -0.048, whereas Kurtosis is 1.002.

**Table 1.** Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Variance	Skewness	Kurtosis
<b>PC</b>	1890	0.1417	0.3489	0.1217	2.0536	5.2174
<b>OWN</b>	1890	0.5121	0.4999	0.2499	-0.0486	1.0023
<b>Firm Age</b>	1890	39.0693	19.4653	378.9010	1.3941	8.4433
<b>Gen</b>	1890	0.5984	0.4903	0.2404	-0.4015	1.1612
<b>AR</b>	1890	0.1067	0.1250	0.0156	2.1122	8.4658

## Multicultural Education

<b>Tang</b>	1890	0.5303	0.2176	0.0473	-0.2317	2.4737
<b>GR</b>	1890	0.0922	0.2568	0.0659	4.6843	36.4392
<b>FS</b>	1890	15.9156	1.4564	2.1213	0.5960	2.8851
<b>PCOWN</b>	1890	0.0550	0.2280	0.0520	3.9027	16.2313

### *Assessment of Multi-Collinearity*

Multicollinearity is the high degree of association between two independent variables (Shrestha, 2020). Table 2 shows the statistics containing VIF values wherein all values exceed the threshold level of 0.5. Hence, the multicollinearity problem does not exist.

**Table 2.** Multicollinearity Analysis

Variables	VIF	1/VIF
<b>PCOWN</b>	1.8	0.555
<b>PC</b>	1.74	0.575
<b>TANG</b>	1.45	0.688
<b>OWN</b>	1.40	0.714
<b>AR</b>	1.38	0.727
<b>FS</b>	1.22	0.817
<b>LVG</b>	1.12	0.893
<b>FAGE</b>	1.05	0.95
<b>GROWTH</b>	1.01	0.993
<b>Mean</b>	1.35	0.768

*PC= political connection, OWN=Ownership structure, PCOWN= political connection, FAGE= firm age, LVG= leverage, AR= Accounts Receivables, TANG= Tangibility, GROWTH= Firm's Growth, FS= Firm Size"*

### *Regression Analysis*

The regression results are presented in table 3 based on the GMM technique wherein the sum of 1701 observations have been analyzed. Investment has been taken as a dependent variable, while ownership structure and political connections have been taken as independent variables in addition to some control variables.

**Table 3.** Regression Results in GMM

Dependent Variable	Investment
Independent Variable	
Lag of Investment (L-1)	-0.0139*** (0.000)
OWN	0.3087*** (0.000)
PC	0.4982*** (0.000)
PCOWN	-0.3060*** (0.001)

## Multicultural Education

Firm Age	-0.0009*** (0.034)
FS	-0.0197*** (0.015)
ROA	1.5353*** (0.000)
AR	-0.2085*** (0.001)
Tang	-0.0252** (0.516)
Growth	-0.0539*** (0.000)
Year Dummies	Yes
No. of Observation	1701
No. of Groups	189
AR (2)	0.2620
Hansen Statistics	0.0000

*Note: The table represents the results of dynamic panel regression using the GMM estimators proposed by (Arellano & Bond, 1991; Blundell & Bond, 1998). The lag of investment is the lagged dependent variable. OWN, PC, PCOWN, and Firm Age are independent variables, whereas FS, ROA, AR, Tang and Growth are used as control variables. \*\*\*, \*\*, \* are statistically significant at the 1%, 5% and 10% levels, respectively. Figures in parenthesis represents the standard error p-values reported for AR (2) and Hansen statistics.*

According to the results, there is single moderation which is taken into consideration and that moderation is of political connection to the ownership of the firm. The results indicate that the coefficient on the lag dependent variable, i.e., investment, is positive, indicating that past values of political connection and its moderation with ownership negatively affect the current values. The values of the lag-dependent variable further reveal that the speed of adjustment is -0.13, indicating that Investment in PCOWN makes a -13% adjustment towards their performance. Further, it is evident from the results that ROA has a positive impact, whereas the rest of the variables had a significantly negative impact. If ownership is to grow by one unit, then the investment is affected by 3.0 times. The results here indicated that investment significantly impacts the ownership structure of family or non-family on non-financial listed companies considering the moderating role of political connections in Pakistan. So, there is an impact of ownership structure as a family or non-family on the investment policy of non-financial listed companies considering the moderating role of political connections in Pakistan.

**Table 4.** Regression Results in GMM

Dependent Variable	Investment
Independent Variable	
Lag of Investment (L1)	-0.0072 *** (0.000)
OWN	0.2641*** (0.000)
PC	0.9253*** (0.000)
PCOWN	-0.0544 (0.622)
Gene	-0.4975*** (0.000)

Gene_PC	-0.7654*** (0.000)
Firm Age	0.0101*** (0.000)
FS	-0.0245*** (0.019)
ROA	1.3890*** (0.000)
AR	-0.4555 *** (0.000)
Tang	-0.0371 (0.494)
Growth	0.0129 (0.473)
Year Dummies	Yes
No. of Observation	1694
No. of Groups	189
AR (2)	0.227
Hansen Statistics	0.000

*Note: The table represents the results of dynamic panel regression using the GMM estimators proposed by (Arellano & Bond, 1991; Blundell & Bond, 1998). The lag of Tobin's q is the lagged dependent variable. OWN, PC, PCOWN, Firm Age, FS, ROA, AR, Tang and Growth are used as control variables. \*\*\*, \*\*, \* are statistically significant at the 1%, 5% and 10% levels, respectively. Figures in parenthesis represent the standard error p-values reported for AR (2) and Hansen statistics.*

The estimated results are presented in table 4. It can be seen that there is double moderation which is taken into consideration and that moderation is of political connection upon the ownership of the firm along with the moderation of generation with the political connection. The results indicate that the coefficient on the lag-dependent variable, investment, is negative, indicating that past values of political connection and its moderation with ownership and with the generation significantly and positively affect the current values of generations. The values of the lag-dependent variable further reveal that the speed of adjustment is .00724, indicating that investment in PCOWN and Gene\_PC adjusts their performance. Further, it is evident from the results that Firm Age, ROA, and growth had a positive and significant impact, whereas FS and AR had a significant negative impact. So, there is an impact of ownership structure as a family or non-family on the investment policy of non-financial listed companies considering the moderating role of political connections in Pakistan.

## 6. DISCUSSION AND CONCLUSION

Based on the findings, it can be inferred that family firms have been centre of attention for the last almost three decades because there was no prior agreement on whether families firms are better or their counterparts but one thing that is not a disagreement that they are different in their operations and decision making. However, this study has established that investment has a significant impact on the ownership structure of family or non-family non-financial listed companies considering the moderating role of political connections in Pakistan. Political connections can change the way things work in an organization, and when it is a family firm and politically connected, can get advantages over others.

In this study, all the non-financial sector of the Pakistan industry was analyzed, but some companies were excluded due to the unavailability of data; the total observations were 1890. The results show that family firms have high investments but political connections moderate the relationship and negatively affect investment levels. When considering the generational impact, succeeding generations have more tendency to invest, significantly when relationships are moderated with political connections.

### 7. CONCLUSION AND FUTURE RECOMMENDATIONS

This study provides theoretical and practical contributions. Theoretically, this is the first study of its kind to look at the influence of political ties on organizational performance in a South Asian nation, specifically Pakistan. It extends the work of Sheng et al. (2011). The tendency of prior studies remains on the United States and other industrialized nations with a private or quasi-private banking industry. It contributes to policy-making, regulation, governance, and accounting practice. As a result, policymakers can produce more effective legislation to prevent political conflicts of interest. Furthermore, the study highlights the importance of political ties as a critical predictor of leverage that should be addressed.

This study contains some limitations. The first limitation is time constraints. This period for data ranges from 2010 to 2020 due to time constraints representing the limitation. Moreover, the prevalence of political ties among publicly listed companies suggests that political ties may be even more prevalent among private non-listed companies. Hence, it only focuses on listed firms and excludes unlisted private organizations. This research considers the relationship between political ties and the financial decisions of companies. However, future research might look at the influence of political ties on stock performance.

### References

1. Abrardi, L., & Rondi, L. (2020). Ownership and performance in the Italian stock exchange: the puzzle of family firms. *Journal of Industrial and Business Economics*, 47(4), 613-643.
2. Anderson, R. C., Duru, A., & Reeb, D. M. (2012). Investment policy in family-owned firms. *Journal of Banking & Finance*, 36(6), 1744-1758.
3. Araya-Castillo, L., Hernández-Perlines, F., Millán-Toledo, C., & Ibarra Cisneros, M. A. (2022). Bibliometric analysis of studies on family firms. *Economic Research-Ekonomska Istraživanja*, 35(1), 4778-4800.
4. Arora, A., & Bodhanwala, S. (2018). Relationship between Corporate Governance Index and Firm Performance: Indian Evidence. *Global Business Review*, 19(3), 675-689. <https://doi.org/10.1177/0972150917713812>
5. Azila-Gbettor, E. M., Honyenuga, B. Q., Berent-Braun, M. M., & Kil, A. (2018). Structural aspects of corporate governance and family firm performance: a systematic review. *Journal of Family Business Management*, 8(3), 306-330.
6. Berrone, P., Cruz, C., & Gomez-Mejia, L. R. (2012). Socioemotional Wealth in Family Firms: Theoretical Dimensions, Assessment Approaches, and Agenda for Future Research. *Family Business Review*, 25(3), 258-279. <http://doi.org/10.1177/0894486511435355>
7. Chami, R. (2001). What is Different About Family Businesses? *IMF Working Papers*, 01(70), 1. <https://doi.org/10.5089/9781451849158.001>
8. Chen, S., Sun, Z., Tang, S., & Wu, D. (2011). Government intervention and investment efficiency: Evidence from China. *Journal of Corporate Finance*, 17(2), 259-271. <https://doi.org/10.1016/j.jcorpfin.2010.08.004>
9. Chrisman, J. J., & Patel, P. C. (2012). Variations in R&D investments of family and non-family firms: Behavioral agency and myopic loss aversion perspectives. *Academy of Management Journal*, 55(4), 976-997.
10. Chrisman, J. J., Chua, J. H., & Litz, R. A. (2004). Comparing the Agency Costs of Family and Non-Family Firms: Conceptual Issues and Exploratory Evidence. *Entrepreneurship Theory and Practice*, 28(4), 335-354. <https://doi.org/10.1111/j.1540-6520.2004.00049.x>
11. Constable, P. (2001), "Pakistan's predicament", *Journal of Democracy*, Vol. 12 No. 1, pp. 15-29.
12. Desai, R. M., & Olofsgård, A. (2011). The costs of political influence: Firm-level evidence from developing countries. *Quarterly Journal of Political Science*, 6(2), 137-178.
13. Dyer, W. G. (2018). Are family firms really better? Reexamining "examining the 'family effect on firm performance'". *Family Business Review*, 31(2), 240-248.
14. Gugler, K., Mueller, D. C., Yurtoglu, B. B., & Zulehner, C. (2003). The effects of mergers: an international comparison. *International journal of industrial organization*, 21(5), 625-653.
15. Harymawan, I., Agustia, D., & Kusuma Agung, A. (2017). Characteristics of politically connected firms in Indonesia. *Problems and Perspectives in Management*, 15(4), 17-23. [https://doi.org/10.21511/ppm.15\(4\).2017.02](https://doi.org/10.21511/ppm.15(4).2017.02)
16. Hashmi, M. A., Brahmana, R. K., & Lau, E. (2018). Political connections, family firms and earnings quality. *Management Research Review*.
17. He, W., & Kyaw, N. A. (2018). Ownership structure and investment decisions of Chinese SOEs. *Research in International Business and Finance*, 43, 48-57.
18. Houston JF, Liangliang J, Lin C, Ma Y. 2012. Political connections and the cost of borrowing. Working Paper, Chinese University of Hong Kong.
19. Kaur, P., Stoltzfus, J., & Yellapu, V. (2018). Descriptive statistics. *International Journal of Academic Medicine*, 4(1),

- 60.
20. Motylska-Kuzma, A. (2017). The financial decisions of family businesses. *Journal of Family Business Management*, 7(3), 351-373.
  21. Pedersen-Bjergaard, A., & Dalby, H. M. (2018). Do Family-Owned Firms Perform Better than Non-Family-Owned Firms? (Master's thesis, Handelshøyskolen BI).
  22. Qian, W., & Chen, X. (2021). Corporate environmental disclosure and political connection in regulatory and leadership changes: The case of China. *The British Accounting Review*, 53(1), 100935.
  23. Sheng, S., Zhou, K. Z., & Li, J. J. (2011). The effects of business and political ties on firm performance: Evidence from China. *Journal of Marketing*, 75(1), 1-15.
  24. Shoukat, A. (2020). Political Connection and Enterprise Development (A Case Study of Nishat Business Group). *Journal of Contemporary Research in Social Sciences*, 2(1), 8-25.
  25. Shrestha, N. (2020). Detecting multicollinearity in regression analysis. *American Journal of Applied Mathematics and Statistics*, 8(2), 39-42.
  26. Tahir, S. H. (2014). Impact of Family Ownership on Value and Financial Decisions of a Firm: A Comparative Analysis of Family and Non-Family Companies Listed at Karachi Stock Exchange (Pakistan).
  27. Xu, L., Lu, C., Xu, Y., & Jia, J. (2011). Image smoothing via L 0 gradient minimization. In *Proceedings of the 2011 SIGGRAPH Asia Conference* (pp. 1-12).
  28. Zellweger, T. M., & Astrachan, J. H. (2008). On the emotional value of owning a firm. *Family Business Review*, 21(4), 347-363.