The Effect of Group and Family Ownership on Firm Performance: Empirical Evidence from Pakistan

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This paper examines the impact of group- and family-ownership on financial performance of a sample of firms listed on the Karachi Stock Exchange from the year 2003 to 2008. Since previous studies have found ownership structure to be endogenously determined, we account for this problem by using two 2SLS technique. This paper contributes to the extant literature as it uses a larger sample of 158 firms and the 2SLS technique; existing studies on this topic in Pakistan lack both of these aspects. Results of the OLS and 2SLS regressions show that group ownership in a firm has no significant impact on a firm's performance. However, when group ownership is significantly higher in a firm, the given firm performs poorly. This is an indication of some sort of expropriation of the minority shareholders. Moreover, the analysis shows that larger firms, firms with higher sales-turnover ratio and growing firms performance better than other firms. Firms with higher financial leverage show poor financial performance. For comparing the performance of family and non-family firms, a sample of 28 family and 26 non-family firms listed on Karachi Stock Exchange is used. The results of two sample t-tests show that mean Tobin's Q of family firms is economically larger than non-family firms; though the difference is statistically insignificant. Accounting-based measures such as return on assets, assets turnover, and profit margin show similar statistics – the statistical differences are negligible between family and non-family firms.

Key Words: Ownership Structure, Associated Firms, Family Ownership, Performance, KSE.

1. Introduction

In today's dynamic business environment, several factors drive a firm's performance. A firms' performance depends upon both carefully designed and advised strategic decisions taken on the part of the entrepreneur or result of a positive development that takes place and mostly both are inevitable. However, there is a list of vital factors that are repeatedly observed enabling a firm to outperform their rivals in the most competitive industries. For instance, one such critical factor is the ownership structure which affects the firm's chances to maintain and improve its performance in the future.

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Researchers have been interested in analyzing the role and impact of ownership structures on the outcome of firms in terms of its performance and value. In emerging economies like Pakistan and India, family ownerships are popular and getting increased attention from the empirical researchers who are evaluating the firm performance in this context. The research on ownership structure stems from principal-agent relationship first proposed by Adam Smith (1776) and then further investigated by Berle and Means (1932), and Jensen and Meckling (1976). Later Fama and Jensen (1983, 1985) studied the advantages and the potential problems which the ownership structure may pose to the performance of the firm.

Since the family owned businesses exist around the globe (see, Shleifer and Vishny, 1986; La Porta et al., 1999; Claessens et al., 1999; Faccio and Lang, 2002; Anderson and Reeb, 2003), the interest in studying the features of family firms and their effect on performance of the firm is increasing many folds. The fast growing industry owned by family firms can be confirmed by the study of Faccio & Lang (2002) where they presented that 44% of 5,232 corporation included as a sample of their study were family owned. Family ownership can lead a firm to outperform non-family firms for mainly two reasons. First, management of family firms make better investment decisions because of the fact that family managers have more firm specific knowledge and are therefore more farsighted and have long-term investment ideas. Secondly, family management can reduce the notorious principal-agent problem, as it helps in aligning the incentives of management with the expectations of the shareholders. Similarly, group association, blockholdings and insiders' ownership solve agency problems between managers and shareholders (Jensen and Meckling, 1976), reduce many transaction costs in labor and material markets, provide insurance mechanism to the group firms, and provide a mechanism to deal with market failures of different sorts (Tarziján, 1999). However, insiders and group ownership is not cost-free. Recently, several studies have shifted the focus towards internal conflicts of interests that shareholders can experience in a firm. La Porta et al. (2000) found strong evidence that expropriation of minority shareholders by controlling insiders is extensive. Different forms of expropriation are possible such as outright theft, sale of assets and products to related parties at unfair prices, giving lucrative positions to unqualified relatives or paying executives excessively. Expropriation creates inefficiency in a financial system in a sense that fund providers will be reluctant to surrender their wealth in face of possible expropriation by the insiders.

The above discussion highlights that it is an important empirical question whether blockholdings and family-group create or destroy value. The main objective of this paper is to investigate the impact of associated-firms ownership and family ownership on the performance of firms listed on the Karachi Stock Exchange. This paper contributes to the extant literature because no other study, to the best of our knowledge, uses as larger sample or the methodology as is used in this paper.

The rest of the paper is organized as follows. Section 2 briefly reviews the existing literature in light of which we draw testable hypotheses. Data, research design and

model specification are discussed in Section 3. Section 4 presents results and discussion. Finally, Section 5 concludes the paper.

2. Literature Review

In this section, we first discuss the theoretical underpinnings of the link between group ownership and firm performance and then discuss whether family ownership can create value or not.

2.1 Group Association and Firm Value

When a group of individuals or institutions hold a significant portion of ownership stake in a firm, the firm performance can be influenced in several ways. Theoretically, such ownership can have implications for firm value from the perspectives of agency costs, transaction costs, inefficiency in labor and or product markets, and many other forms of market failures. These aspects are reviewed next.

2.1.1 The Monitoring Hypothesis

The presence of group companies can be thought of as a special case of large shareholders. The agency problems discussed by Berle and Means (1932) or Jensen and Meckling (1976) are alleviated to some extent by large shareholders who have incentives and capabilities to monitor the activities of managers (Shleifer and Vishny, 1986). This agency view suggests a positive link between group association and firm performance;

2.1.2 The Minority Shareholders' Expropriation Hypothesis

Shliefer and Vishny (1997) and Villalonga and Amit (2006) argue that large shareholders can exploit minority shareholders due to their power and dominance. The expropriation can take many forms like installing unqualified relatives on key management positions, excessive compensation plans for executives, tunnelling of resources to group companies, or outright theft (La Porta et al. 2000). This leads us to test the following hypothesis;

H_1: *Group ownership beyond a certain threshold level has negative impact on firm's performance.*

2.1.3 Group Reputation Hypothesis

It is believed that business groups do not act opportunistically due to their reputation as these groups are highly visible. Their visibility might be due to their big sizes and/or usually the famous business tycoons or personalities with bureaucratic and political backgrounds that sit on their managerial boards (Dewenter et. al, 2001). This view again leads to hypothesis 1 (H1).

2.1.4 Group Association as Solution to Market Failures

If a firm is a part of a large group of companies, the firm can reap several benefits from the group association. First, group companies can act as large external shareholders who can help in controlling expropriations by the top management. James (1999) adds to the view by arguing that ownership held by associated firms are more long term in nature and this very characteristic of unmitigated sphere of investment leads to efficient strategic decisions. Another argument that goes in favor of associated ownership is that a firm can benefit from the goodwill and reputation of the group. Furthermore, group companies assist one another through shared resources such as finance, technology, and experience (Villalonga and Amit 2006; Wang, 2006; Sraer and Thesmar, 2007; and Maury, 2005).

2.1.5 Complexity of Intra-Group Transaction

A complex web of intra-group transactions might make it more difficult for analysts and investors to know about their opportunistic behavior. Thus the complexity of intra-group transaction can increase the probability of opportunistic behavior. (Dewenter et. al, 2001).

In an agency framework, a higher ownership percentage of group companies should reduce agency conflict between shareholders and managers, but it might lead to severe conflicts of interest between majority-insiders and minority-outsiders. Thus, if the group-reputation hypothesis holds, group companies should exhibit better market and accounting performance than non-group companies, as the transaction costs of such companies are assumed to be low due to the group size and reputation. However, if complexity of transaction hypothesis is true, then group companies would display weak performance, which would imply that the group companies are involved in minority shareholders exploitation, and/or the group has lower reputation and is facing higher transaction costs.

In view of the above, two testable hypotheses are developed. Given that group companies monitor the managers' activities and/or the firm does not exploit minority shareholders due to the group's reputation, a testable hypothesis is:

H_2: Ownership stake of associated companies in a firm has positive impact on the firm's performance

If group companies do not care about the group's image and/or the intra-group transactions are considered complex by analysts and shareholders, then they will demand risk premium in view of possible expropriation of minority shareholders. A testable hypothesis is:

H_3: Higher ownership percentage of associated companies in a firm leads to a poor performance of the firm.

Some empirical evidence exists on the performance of group companies in Pakistan. The study used mainly descriptive statistics in the studying relationship between group association and firm performance from 1998 to 2002. Their results showed that group firms were larger in size, had lower sales growth variability and a higher operating profitability in comparison to non-group firms.

2.2 Family Ownership and Firm Performance

Family ownership has several theoretical advantages. First, management of family firms make better investment decisions because of the fact that family members have more firm specific knowledge and are therefore more farsighted. Second, they have a long-term investment horizon due to which they take a more mature and long-term approach towards the management of the firm. Secondly, family ownership can reduce the notorious principal-agent problems which are discussed by Berle and Means (1932) and Jensen and Meckling (1976). Consistent with the above, several empirical studies such as Palia and Ravid (2002), Morck et al. (1988) and Fahlenbrach (2004) have found positive impact of family ownership on firm performance.

However, the above advantages of family ownership will be offset by potential costs of family ownership. Burkart et al., 2003 argue that management of a firm by family members may be potentially less efficient and thus entail loss to the firm when compared to other firms which are managed by rather more professional managers. In line with these expectations, Smith and Amoako-Adu (1999) found that reaction of the market was negative when family firms hired family members as managers.

Moreover, similar to the arguments presented in the preceding section where we discussed the group ownership in relation to firm performance, we can extend that discussion to family firms as well. For example, Villalonga and Amit (2006) argue that there is a possibility of minority shareholders' expropriation in family firms.

Empirical findings related to impact of family ownership on firm performance are mixed. Julio et al. (2008) compared the market value of a firm as well as firm performance. They found that family owned firms outperformed non-family owned corporations. Their study provided interesting results that family ownership positively impacted the firm value; however, when the family ownership concentration rises above a certain level, the value of a firm decreases. This is an evidence of minority shareholders expropriation. Furthermore, it was observed that even though higher ownership concentration negatively impacted firm value, still the performance of family firms was superior to the non-family firms.

Barontini and Caprio (2005) studied the relationship between firm performance and ownership structure with a data of 675 publicly traded companies spread out in 11different countries throughout the continental Europe. Their results indicated that family control had a positive impact on the performance of European corporations. However, Barontini and Caprio (2005) observed that the ROA and Tobin Q of a family-descendant-run corporation were low as compared to founder controlled corporation,

but as compared to Non-family Corporation, descendant-controlled corporation performed better.

Feng-Li and Tsangyao (2010) tried to find the optimal level of family ownership concentration studying 242 companies amongst 18 industries of Taiwan. These companies were listed between 1997 and 2006. A threshold regression test was conducted to determine the optimal level of concentration of family ownership where value of a firm would be maximum. Tobin's Q was used to determine firm value. They calculated three levels of owner's concentration to determine the relationship with firm value. The levels were 0.075%, 31.76% and 33.61%. The results showed that at the level when ownership concentration is below 0.075%, with a 1% increase in ownership the Tobin Q decreases by 257.71%. On the other hand, when the concentration of ownership was between 0.075% and 31.76%, the Tobin's Q increased by 0.78% with every 1% increase in the concentration of ownership. Tobin's Q increased by 1.67% when the family ownership concentration was between 31.76% and 33.61%. However, greater than 33.61%, the Tobin Q rate of increase decreased to 0.51%. Therefore it was concluded that the optimal level of ownership concentration was between 31.76% and 33.61% where the value of the firm is at its maximum. (Feng-Li and Tsangyao, 2010)

A study by Han An and Naughton (2001) on Korean listed firms classified family ownership into three categories that were family ownership, pure family ownership and owner-control disparity. Data o m3054 firms were used from the year 2000 to 2005. They found that family and pure family ownerships increased the firm value and performance whereas owner-control disparity had no significant impact on the firm performance and value. The calculations were made through Tobin's Q for market value of firm and ROA to find the performance in accounting terms. They found strong evidence that family ownership in Korea mitigated agency problems to a greater extent.

Gürsoy and Aydoğan, (2002) studiedTurkish corporations which are characterized by highly concentrated family owned businesses. Their results showed that higher ownership concentration in families were associated with higher P/E ratio; however, on the same time with lower accounting performance. In comparison to group-owned firms, family ownership had lower P/E ratio and thus lower performance and lower risk. Whereas government owned firms have higher risk and higher market performance but have lower accounting returns.

Benjamin Maury, (2005) conducted a study on a sample of 1672 non-financial firms in Western Europe for finding whether non-family controlling shareholders were outperformed by family owned and controlled firms. Their results showed that family firms had higher performance than other types of owners controlled firms. Tobin's Q showed that under family control, the value of firm rises by approximately 7% in comparison to non-family firms. When ROA was examined, family owned firms had almost 16% higher profitability in comparison to non-family.

Anderson and Reeb (2003) investigated large publically traded firms of the U.S. to determine the relation between the founding family ownership and performance of a firm. Their study confirmed that family firms performed at least as well as that of non-family firms. They used both ROA and Tobin's Q as performance measures. The results of ROA regressions showed that family firms were significantly more profitable than the non-family firms. Further, they found that the returns are even higher when a family's member acts as CEO. They interpreted that the family member understands the business well and work with more dedication. The results from the market-based measure of performance showed that family businesses are more valuable. The findings were both statistically and economically significant to proves that family firms had 11.6% greater Tobin's Q than non-family firms. Overall their results were in contrast to their hypothesis that minority shareholders were negatively affected by founding family ownership rather results proved that family ownership represented an effective and efficient organizational structure.

Based on the above discussion and empirical evidence, the following hypothesis can be tested

H_4: Family ownership has positive impact on firm performance.

3. Data and Methodology

3.1 Sample Selection, Data Collection, and Screening

The initial data sample was based on the firms listed on Karachi Stock Exchange excluding the financial firms (that are Banks, Modaraba companies, Insurance companies etc). The data of these companies were taken for the year 2003 to 2008. The financial data and detail of these companies were available from secondary sources i.e. from the annual reports published by the companies. For group association, we were able to identify 158 firms to have group association of some sorts. For family firms, the data was divided on the basis of family and non family ownership. This distinction was made by studying the pattern of shareholdings in annual reports of the firms as well as by using the websites of the firms. Finally, we were able to find a sample of 54 firms, the details of which are given in Table 3.1

Table 3.1

Details of firms included in a sample on the basis of family and non-family ownership

	Family Firms	Non-Family Firms
Initial Sample	71	66
Non-Operating	6	8
Missing Financial Data or negative values	37	32
Final Sample	28	26

Firms such as Banking, Finance, Real Estate and insurance etc were excluded from the initial sample. Similarly, those firms which were not operational during the mentioned period, or those that were controlled by companies operating in different countries were excluded from the research sample. Firms with negative equities, outlier firms and those with data unavailable in the time period of the research were also excluded. Thus the final sample included 54 firms, divided into two sub groups of 28 family owned and 26 non family owned firms.

3.2 Measures of Variables

Different proxies have been used to measure accounting-based and market-based performance measures. For measuring accounting based performance, the variables Return on Asset (ROA) and Profit margin are used for accounting-based and Tobin's Q for market-based measures of firm performance. Several other variables of interest are also considered. These variables include financial leverage and asset-turnover ratio. The choices of these five variables are in consistence with methods of measurement applied by previous researchers (Gunduz and Tatoglu, 2003; Anderson and Reeb, 2003; Han and Naughton, 2001; Barontini and Caprio, 2005).

Definitions, explanations and the method of calculation of these variables are as below:

3.2.1 Associated Ownership (ASSO)

This is measured by the ownership percentage of associated firms and denoted by *ASSO*. This figure excludes any shares held by the board of directors or financial institutions that are not associated with the firm. This information is provided in and has been retrieved from the companies' annual reports. To test the minority expropriation hypothesis, we also include a squared term of the ASSO that would indicate whether associated companies ownership beyond a certain level leads to different performance than at lower levels.

3.2.2 ROA

Return on Assets (ROA) is a scaled measure of earnings that is not influenced by the financial structure of the company. It is calculated as:

Return on Assets = net profit / total assets.

The ratio of return on asset gives us a standard to determine how effectively financial managers employ each dollar invested in the asset of the firm, irrespective of whether the dollar came from investors or creditors.

3.2.3 Tobin's Q

Noble laureate, James Tobin from Yale University hypothesized that "The combined market value of all the companies on the stock market should be about equal to their replacement costs". The ratio is calculated as:

Tobin's Q = Total Market Value of Firm / Total Assets

Where,

Total Market Value of Firm = Market value of Equity + Debt
Market value of Equity = No. of Shares outstanding x Market share price
Debt = Total asset – Equity

A low Tobin's Q (0-1) indicates that a greater cost is implied to replace the firm's assets than the stock's value. Thus it implies that the firm's stock is undervalued in the market. On the other hand, a higher Tobin's Q suggests that the stock of the firm is more expensive than the cost of replacement of assets of the firm. Other control explanatory variables are given in table 3.2

Table 3.2
Names, Symbols and Measurements of the Variables Used in This Study

Variable	Symbol	Measurement
Associate companies ownership	ASSO	Shares owned by associate companies / total shares
Tobin's Q	Q	(book value of debt + market value of equity) / book value of assets
Return on Assets	ROA	Net income / total assets
Firm Size	SIZE	Natural log of total assets
Growth rate	GROW	Geometric mean of annual percentage increase in assets
Sales Turnover ratio	ST	Sales/ total assets
Firm's systematic risk	BETA	Ratio of covariance between stock returns and market returns to the variance of market returns
Firm's idiosyncratic risk	SER	firm-specific error term in the beta regression
Financial leverage	LEV	Total debts / total assets

3.3 Analytical Tools

To study the relationship between group ownership in a firm and the firm's performance, we employ simple OLS and two stage least square method (2SLS) regression methods. Studies like Demsetz (1983) propose that ownership structure is an endogenous outcome of the profit maximization motive of existing and potential investors. This proposition necessitates the use of 2SLS method. For comparison purpose, we report results of both the OLS and 2SLS regressions. Our regressions models in this regard are as follows.

$$ROA_{it} = \alpha + \beta_1(ASSO_i) + \beta_2(SIZE_{it}) + \beta_3(GROW_i) + \beta_4(LEV_i) + \beta_{5-31}(INDUS_i) + \beta_{32-36}(YEARS_i) + \varepsilon_{it}$$

$$ASSO_i = \alpha + \beta_1(ROA_{it}) + \beta_2(SIZE_{it}) + \beta_3(GROW_i) + \beta_4(LEV_{it}) + \beta_5(BETA_i) + \beta_6(SER_i)$$
$$\beta7(ST_i) + \beta_{7-33}(INDUS_i) + \beta_{34-38}(YEARS_i) + \varepsilon_{it}$$

Where, *BETA, SER*, and *ST* are the instrumental variables for ASSO. *INDUS* and *YEARS* are dummy variables for 27 industries and 5 years, respectively. Complete list of names and measurements of the other variables is given in Table 3.2.

For testing the hypotheses related to family ownership, we use two-sample t-test because it is useful in cases where two categories of same categorical variable are to be compared. It is a hypothesis test for answering questions about the mean where the

data are collected from two random samples of independent observations, each from an underlying normal distribution. A comparison of this sort is common in social sciences and is used as a statistic analysis tool in our research. This test is used because it helps in assessing two groups if they are statistically different from each other or not.

The formula for the pooled estimator of σ2 is given below

$$S_p^2 = \frac{(n_1 - 1)\, s_1^2 + (n_2 - 1)\, s_2^2}{n_1 + n_2 - 2}$$

Where s1 and s2 are the standard deviations of the two samples and n1 and n2 are the sizes of the two samples. The formula for comparing the means of two populations using pooled variance is

$$t = \frac{\bar{x}_1 - \bar{x}_2 - \Delta}{\sqrt{s_p^2\left(\dfrac{1}{n_1} + \dfrac{1}{n_2}\right)}}$$

Where x 1 and x 2 are the means of the two samples, Δ is the hypothesized difference between the population means (0 if testing for equal means), sp2 is the pooled variance, and n1 and n2 are the sizes of the two samples. The number of degrees of freedom for the problem is

$$df = n_1 + n_2 - 2$$

4. Analysis and Findings

In this section, firs we present descriptive statistics, then results of the regression models that test the relationship between associated firms' ownership and a firm performance. Later, we present and discuss the results of the t-test about family ownership and firm performance.

Table 4.1

Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	852	0.095	0.109	−0.505	0.570
ASSO	852	0.297	0.288	0.000	0.970
ASSO²	852	0.171	0.230	0.000	0.941
ST	852	1.166	0.892	0.000	6.910
GROW	852	0.159	0.118	−0.074	0.582
LEVE	852	0.586	0.204	0.014	1.000
SIZE	852	7.746	1.556	1.723	12.141

Table 4.2

Matrix of Correlation among the Variables

	ROA	*ASSO*	*ST*	*GROW*	*LEVE*	*SIZE*
ROA	1.000					
ASSO	0.1948	1.000				
ST	0.364	0.245	1.000			
GROW	0.2462	0.002	0.082	1.000		
LEVE	‾0.3318	−0.114	0.025	0.052	1.000	
SIZE	0.1605	0.292	0.052	0.117	0.169	1.000

The descriptive statistics in Table 4.1 show that there are consideration dispersion almost in all variables. Matrix of Correlation shows that the problem of multicollinearity is not severe among the explanatory variables. Furthermore, the correlations indicate that larger firms, firms with higher growth rates, and higher sales turnover, and firms with more associated holdings are more profitable than other firms. Financial leverage is associated with lower accounting returns.

4.1 Results of the Regression Analysis

Table 4.3 shows results of the regression analysis. Coefficients of the explanatory variables are given outside the parentheses in Column 1 and 2, whereas the standard errors of the coefficients are given inside the parentheses. The *, **, and *** show statistical significance at 1%, 5%, and 10%, respectively.

Both OLS and the 2SLS regressions show similar results. The results indicate that at lower levels of ownership percentage of associated firms has no impact on ROA of the sampled firms. This finding is in contrast to the positive correlation between *ROA* and *ASSO* in Table 4.3. The difference lies in the nature of analysis. Univariate analysis may not correctly capture the dynamics of relationship between several variables when more than one variable affect the dependent variable. The coefficient of $ASSO^2$ is negative and statistically significant. This indicates that at higher levels, ownership stake of associated firms negatively affects firm performance. This is in line with the minority expropriation hypothesis. When group companies become more and more powerful, they develop many ways in which they expropriate minority shareholders.

Among the control variables, sales turnover (*ST*) and firm size (*SIZE*) have positive influence on the firm's *ROA*. Sales turnover is an indicator of a firm's efficiency. More efficient firms will generate more sales per unit of assets. And firm size can be a proxy for economies of scale or the firm's riskiness. Larger firms can enjoy many advantages which smaller firms cannot enjoy. For example, larger firms have economies of scale advantage, have more resources which can be utilized for research and development,

and have larger market share. Finally, financial leverage has negative impact on firm's performance.

Table 4.3

OLS and 2SLS Regressions for ROA and Associated Firms' Ownership

Variables	OLS.	2SLS
ASSO	0.038(0.033)	1.433(0.882)
ASSO^2	−0.081(0.042)***	−1.73(0.925)***
ST	0.049(0.004)*	0.054(0.008)*
GROWTH	0.157(0.027)*	0.09(0.062)
LEVE	−0.163(0.015)*	−0.137(0.031)*
SIZE	0.02(0.003)*	0.025(0.01)*
INDUS1	0.01(0.018)	−0.068(0.054)
INDUS2	0.012(0.01)	−0.021(0.026)
INDUS3	−0.015(0.033)	−0.249(0.144)***
INDUS4	−0.073(0.018)*	−0.116(0.04)*
INDUS5	−0.009(0.011)	−0.05(0.03)***
INDUS6	−0.007(0.012)	−0.086(0.049)***
INDUS7	0.055(0.04)	0.31(0.16)***
INDUS8	−0.079(0.026)*	−0.134(0.056)**
INDUS9	−0.024(0.016)	−0.044(0.031)
INDUS10	−0.125(0.025)*	−0.209(0.065)*
INDUS11	0.052(0.034)	−0.164(0.135)
INDUS12	0.02(0.015)	−0.06(0.052)
INDUS13	0.034(0.017)**	−0.034(0.049)
INDUS14	0.098(0.017)*	0.053(0.04)
INDUS15	0.022(0.033)	−0.092(0.087)
INDUS16	−0.036(0.042)	0.165(0.135)
INDUS17	0.085(0.036)**	0.276(0.125)**
INDUS18	0.116(0.02)*	−0.027(0.087)
INDUS19	0.106(0.017)*	0.038(0.049)
INDUS20	0.069(0.013)*	−0.04(0.065)
INDUS21	−0.003(0.019)	−0.114(0.07)
INDUS22	−0.125(0.038)*	−0.369(0.152)**
INDUS23	0.06(0.018)*	−0.077(0.083)
INDUS24	0.023(0.018)	−0.005(0.036)
INDUS25	0.05(0.018)*	−0.049(0.064)
YEAR1	0.009(0.009)	0.008(0.016)
YEAR2	0.003(0.009)	0.011(0.017)
YEAR3	0.002(0.009)	0.003(0.017)
YEAR4	−0.022(0.009)**	−0.018(0.017)
YEAR5	−0.025(0.009)*	−0.021(0.017)
Constant	−0.052(0.021)**	−0.024(0.041)
F-Test	7.59	24.31
R^2	0.1359	0.5178
Adj. R^2	0.1241	0.4921

The table shows regression results of a model where ROA is the dependent variable. ROA is measured by net income divided by total assets. Coefficient s of the explanatory variables are given outside the parentheses in next columns to their respective variables, whereas the standard errors of the coefficients

are given inside the parentheses. The *, **, and *** show statistical significance at 1%, 5%, and 10%, respectively. ASSO is the percentage of shares held of associated companies. ST is sales divided by total assets. GROW is the geometric mean of the past five years annual percentage increase in assets. LEVE is measured by total debt to total assets. SIZE is the natural log of total assets. INDUS are dummy variables for 27 industry listed on the KSE. And YEAR are the dummy variable for years.

4.2 Results of the Two-Sample T-tests

In this section, we discuss the performance comparison of the family and non-family firms with help of two sample-tests. The results of the t-tests are given in Table 4.4

Table 4.4

Results of the T-Tests

Variables	Family Firms	Non-Family Firms	Difference	T-test
ROA	1.80%	3.40%	-1.60%	-1.58
Tobin's Q	4.48	1.28	3.20	0.95
ATO	1.04	1.04	0.00	-0.015
LEVE	0.93	0.7	0.23	4.61*
PM	0.016	0.012	0.00	0.18

The table shows results of the t-tests for comparison of various financial aspects off 56 family and non-family firms. ROA is measured by net income divided by total assets. Tobin's Q is measured by the ratio of market value of equity plus book value of debts divided by book value of assets. ATO is sales divided by total assets.. LEVE is measured by total debt to total assets. PM signifies profit margin which is calculated by net profit divided by sales.. The *, **, and *** show statistical significance at 1%, 5%, and 10%, respectively.

The results of two sample t-tests for comparing the means of ROA, Tobin's Q, Asset Turnover, Debt Ratio and Profit margin in family-owned and non-facility owned firms are given in Table 4.4. The results show that mean of ROA in family-owned firms is less than that of non-family owned firms (1.80% family, 3.40% non-family). However, the null hypothesis cannot be rejected at any conventional level.

The Tobin's Q of family-owned firm is economically larger than that of the non-family owned firms (4.48 for family and 1.28 for non-family). However, the statistical significance of the difference in means is negligible. Once again we fail to reject the null hypothesis. The T-test was insignificant with the value of 0.95. Both the accounting based measures and the market based measures suggest that family ownership does not contribute much to the firm's value. The accounting based measure, i.e. ROA, suggest that family ownership do not result in any increased efficiency in the utilization of assets or cost reduction. And market based measure, i.e. Tobin's Q, lend further support to the ROA results. Since family ownership does not help the firm in improving its efficiency, the market is well responsive to this fact as evidenced by the statistically insignificance difference of Tobin's Q of family and non-family owned businesses.

The accounting-based measures of efficiency are not significantly different in the two groups of firms. The mean of Asset Turnover of family firms is approximately same for

both types of ownership structures. This again shows consistency of the results with the previous findings related to ROA and Tobin's Q.

There can be two possible explanations for the indifferences in the financial performance between family-owned and non-family-owned business. First, the family businesses do not add any value from agency model perspective. Like shown in the literature, agency problems can be solved by if managers' ownership is increased in the firm. Similarly agency problems are mitigated by the presence of some large shareholders who is capable of and have ample incentives of monitoring the activities of shareholders. Family businesses can be thought to play such roles. But if family businesses assume passive roles, these assumed benefits of monitoring will never materialize.

The second explanation can be given from minority-expropriation hypothesis (reference). Since family-controlled businesses have strong control on many decision of the firm, they are in better position to expropriate wealth away from minority shareholders. One way of doing so is to collude with the accountants and internal auditors to inflate cost of production or deflate sales revenue in accounts. This way, even if the firm is profitable, it will show mundane performance. The increased-monitoring advantage because of family-control will be downplayed by the fraudulent accounts. Resultantly, the family-control advantage will never be shown in the accounting or market based measures of performance.

Debt ratio result showed that mean of 0.93 of family firm is higher than 0.7 of non-family firms, this result is significant with a T-test value of 4.61. One explanation of such a higher leverage ratio in family-controlled firms can be that these firms rely primarily on debt-financing for control purposes. Such firms do not want to dilute the family control by issuing new shares.

5. Conclusion

This research determines the impact of group-association and family ownership on financial performance of a sample of firms listed on the KSE. This research is motivated by the ubiquitous presence of group-firms and family-owned firms in Pakistan. There are several trade-offs that group-association and family ownership offer. The question that concerns shareholders is that whether family and group firms creates value of destroys values for other minority shareholders. This paper tries to provide some preliminary evidence related to this question. Towards this end, two important aspects ownership structures are analyzed; the ownership stake of associated firms and the ownership of family firms. To know the impact of the former on the firms' performance, OLS and 2SLS techniques are used on a sample of 158 firms. And in the case of the later, a two sample t-test is used to differentiate between the performance of family and non-family firms. Results of the OLS and 2SLS regressions show that group ownership in a firm has no significant impact on a firm's performance. However, when group ownership is significantly higher in a firm, the given firm performs poorly. This is an indication of some sort of expropriation of the minority shareholders. Moreover, the

analysis shows that larger firms, firms with higher sales-turnover ratio and growing firms performance better than other firms. Firms with higher financial leverage show poor financial performance.

For comparing the performance of family and non-family firms, a sample of 28 family and 26 non-family firms listed on Karachi Stock Exchange was taken for the years 2003 to 2008. Two sample T-test was applied as a statistical tool for finding mean differences of different performance variables between family and non-family firms. The results indicate that Tobin's Q of family firm is economically larger than non-family firms, suggesting that the market perceives the family firms better than non-family firms; though the difference is statistically insignificant. Accounting-based measure such as return on assets, assets turnover, and profit margin show similar statistics – the statistical differences are negligible between family and non-family businesses. There can be two possible explanations for the indifferences in the financial performance between family-owned and non-family-owned business. First, the family businesses do not add any value from agency model perspective. This happens when family businesses assume passive roles; the assumed benefits of monitoring do not materialize. The second explanation can be given from minority-expropriation hypothesis. Since family-controlled businesses have strong control on many decision of the firm, they are in better position to expropriate wealth away from minority shareholders. Thus, it is possible that family ownership has advantages, but at the same time they indulge in minority-expropriation. The expropriation offsets the advantage of family ownership.

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