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IMPACT OF CONCENTRATED OWNERSHIP ON FIRM GROWTH

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Abstract

This study is an attempt to investigate the impact of concentrated ownership on the growth of the manufacturing firms listed at Pakistan Stock Exchange for the data 2006-2016. A number of panel data estimation techniques are employed; all confirm the positive alignment effect of concentrated ownership on firm growth in line with Agency Theory and Penrose Theory of Firm Growth. In addition to this, a number of firm specific factors are also found to have a significant impact on firm growth. Moreover, the study provides practical implication for investors and policymakers in understanding the role of concentrated ownership on firm growth.

Keywords: Concentrated Ownership, Firm Growth, Sales Growth.
JEL Classification: G32, D22, C23.

I. Introduction

Utmost significance and multidimensional impact on the overall society mark the crucial importance of firm growth. It is an organizational outcome and is defined as 'the increase in a firm's size from one point in time to another' [Penrose (1959)]. Increase in the firm's size leads to an expansion in the volume of economic activities in an economy where more resources are demanded and increased production and sales create additional employment opportunities that impact the wellbeing of the people and their standard of living. Eventually, this increased economic activity is translated into economic growth and development of a country. Birch, (1981) study cross-country differences in firm growth in terms of job creation and Bartelsman, et al., (2005) explore relative economic performance through productivity growth of OECD countries. These researches have highlighted the difference and importance of policy and institutional settings that help in creating the most favourable conditions for the firms to grow and prosper. Oliver (1991) identifies varied strategic responses that firms employ in response to institutional processes that affect them. Since then researchers have been keenly studying the institutional factors af-

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fecting firm performance. Institutional factors include the rules and regulations (governance mechanisms), capital market conditions and fiscal plus monetary policy [Rajan and Zingales (2004)]. One of the important institutional factors is the ownership structure of firms [Demsetz (1988), Mascarenhas (1989), Morck, et al. (1988)]. Since each owner type has a different objective and motive of doing the business; hence this affects how they exercise the control rights over the firm, which ultimately impacts the firm's performance and growth. Does the concentration of ownership impact the growth of manufacturing firms in Pakistan is the question of this research? This study would help to understand the role of ownership concentration in firm grow, and would assist in developing policies that can give boost to firm expansion in the long run. Concentration of ownership is defined as percentage of shares owned by the five largest shareholders and aims to study the impact of ownership concentration in terms of control rights on the growth of the firms.

The well-acclaimed Agency Theory is the most suited theory to explain the phenomenon of ownership structure, particularly concentrated ownership. As far as firm growth is concerned, Nason and Wiklund (2018) strongly propose future research on firm growth to be based on the Penrose an Theory with reference to resources versatility. Therefore, this research is relying on the Agency Theory for ownership structure and Penrose Theory to explain the growth of firms. Concentrated ownership enforces strict monitoring that curbs the opportunistic behaviour of the managers and results in an alignment effect, which leads to the growth of the firm. Plenty of research is available on the relationship between ownership concentration and the financial performance of the firms. The investigation into the determinants of firm growth has been done in various disciplines, from diverse angles, nevertheless, the knowledge on the determinants of firm growth is still limited and highly fragmented [Davidson and Wiklund (2000), and Wiklund, et al. (2009)]. Most of the firm growth literature has emerged from developed countries, few researchers like Coad, et al. (2008), and McKenzie and Woodruff (2015) and others have studied the growth of firms in developing countries as well. However, very little knowledge is available on firm growth in Pakistan. A handful of researchers like Afraz, et al. (2014), Ahmed and Hamid (2011) and Noreen and Junaid (2015), have made their contributions towards unveiling the phenomenon of firm growth in Pakistan. The focus of the research on firm growth in Pakistan has been on the determinants or the obstacles/barriers to the growth of the small and medium-sized firm. The industrial sector constitutes 20.30 per cent to GDP[1] of Pakistan. Large-scale manufacturing firms (LSM) in the industrial sector are consistently showing low growth over the last few years; yet the investigation in this area is sparse. This motivated the researcher to investigate the elements responsible for low growth of LSM firms by focusing on the ownership structure of these firms, particularly the

[1] Pakistan Economic Survey, 2015-16.

concentration of ownership that gives owners the power to take appropriate decisions that can lead to firm growth.

The propensity of the firm to develop dynamic capabilities to grow depends upon the will and capability of the owner-manager, the policy and institutional setting of the environment within which it operates. Bishop, et al. (2009) calls for further research in this area to develop a firm conclusion regarding the extent of the influence of institutional and environmental settings on the growth of the firm. Furthermore, most of the researchers have studied firm growth from growth rate point of view, explaining differences in growth rates across firms, ignoring the existence of considerable qualitative differences that make the firm grow more than others. The research on the association of ownership structure and firm growth is scant. Impact of ownership structure has largely been studied with reference to how firms perform financially, measured in terms of profitability or Tobin's Q, whereas growth has miserly been explored before.

To the extent of the researcher's awareness, no study has explored the impact of concentrated ownership on the growth of the firms before, especially from developing economies like Pakistan using the resource-based view. Therefore, this study is a humble contribution in this regard and extends the Penrose Theory of firm growth from ownership structure perspective. This study has a practical implication for the stakeholders, particularly the investors and regulators in comprehending the role of ownership concentration on the growth of the firms. A sample of 80 PSX listed large scale manufacturing firms is taken spanning a period of 11 years from 2006 to 2016.

The present study is organized in the following manner. Section II covers the theoretical framework of ownership structure and the firm growth, Section III provides an empirical review. Section IV explains the research methodology and data. Section V includes the results and discussion, whereas the last Section VI consists of the conclusion and directions for future research.

II. Theoretical Framework

The notion of firm growth is based on the concept of how a firm is defined. The elucidation of the term 'firm' has been through a long journey, from transaction cost perspective by Coase (1937) to the behavioural and managerial concept of the firm by Baumol (1962) to the principal-agent relationship in a firm by Marris (1964) and Williamson (1966). Alchian and Demsetz (1972) came up with the theory of the firm in context to the property rights, whereas Jensen and Meckling (1976) describe the firm in respect to 'nexus of contracts'. However, Penrose (1959) in her 'Theory of the Growth of the Firm' defined firm as a 'bundle of resources' tied together by administrative skills targeted to the most efficient use of them. Penrose defines firm growth as an increase in the size of the firm from one point in time to the other. She elaborates

the concept of firm growth in terms of how quickly firms accumulate and assimilate the required resources and could tap the growth opportunities when it has underutilized internal resources and this process leads to firm expansion [Penrose (1959)]. Since growth is a continuous process, therefore firm grow in size with time and this increase in size has an implication for the firm to modify its organizational structure to function more efficiently and smoothly. Growing firms on reaching a certain level opt to get themselves incorporated to avail the benefits of economies of scale and grow at a different scale. An incorporated firm function very differently from a small owner managed firm. An incorporated firm is owned by shareholders and is practically run by some of the shareholders and the managers. The power to take decision is divided between the shareholders and the managers. The decision power is commensurate with the concentration of ownership in the firm and the devolution of authority to the managers. Growth is a vital requirement of a firm to survive in the market. Large successful firms create value for their shareholders through growth.

'Theory of the Growth of the Firm' by Penrose is rooted in the concept of firm with separation of ownership and control and with de facto control vested in the managers, who might have least interest in the payment of dividend to the absentee owners (shareholders). Agency theory by Jensen and Meckling (1976) and later by Shleifer and Vishny (1986) discusses the separation of ownership and control that has its fundamental foundations in the concept of conflicting interests of the two related parties - the principal and the agent. Over the period of time the owners and managers have been dealing with the conflicting interests of each other and resultantly the ownership structure of the firms has evolved into concentrated ownership types and the concept of widely held corporations has become a rare phenomenon except for few countries [Porta, et al. (1999)].

When the firms have concentrated ownership structure, the managers are bound to follow the strategies of the large block-holders and could not take decisions on their own. Agency theory also postulates the fact that concentrated ownership results in better and effective monitoring, thus help alleviate the conflict of interest phenomenon between the value-maximizing shareholders and self-interested managers – the alignment effect. On the other hand, when firms have concentrated ownership, the owners get an opportunity to expropriate the profits of minority shareholders, especially where legal protection to minority shareholders is weak – the entrenchment effect.

Growth intention of the entrepreneurs (owners/shareholders) is found to have a positive impact on the subsequent growth of the firm [Delmar and Wiklund (2008), and Wiklund and Shepherd (2003)] that refers to the crucial importance of ownership in firm growth. Agency theory also purports the idea that the firms that possess better corporate ownership structure have lower agency cost and therefore show better firm performance and valuation in the market. Penrose theory has its foundation in the 'Resource-Based View of the Firm' that includes both physical as well as human resources. Penrose believes that the growth of the firm is dependent upon the people running the organization. The entrepreneurial intention of the owner and the will and ability of the

managers are antecedents of the firm growth. Entrepreneurial capabilities rest on the owners' and the executive's imaginative skills, whereas managerial capabilities are practical and directly linked to the execution of the ideas. How managers identify and exploit the growth opportunities depend upon the managers' assessment skills and the knowledge and resource base of the firm [Penrose (1959)]. A similar set of resources operated by different managers produce entirely different results [Kor, et al. (2007)].

Firms with dispersed ownership would lack the entrepreneurial outlook, and firm growth would solely lie in the hands of the managers. Since there is a lack of ownership control, firms perform less than optimal and growth suffers. Firms that have concentrated ownership structures like family ownership or block-holder ownership, their growth strategy is designed to fulfill their long-term objectives which are inextricably linked to the preservation of ownership control of the firm at any cost. Although the ownership structure works as an alignment effect and curbs the opportunistic behaviour of the managers, these firms usually are not interested in their growth instead are more interested in the continuous existence of the firm so that the business could be transferred to the next generation [Ding, et al.(2011)]. Furthermore, the owners of the concentrated ownership firms are not ready to take the risk associated with the new ventures or expansion proposals as the risk would be borne by the few owners and could result in losses. Moreover, the identification and exploitation of growth opportunities depend upon the entrepreneurial orientation of the owners and empirical evidence has showed that family firms face nepotism and unprofessional management [Garcia-Castro and Aguilera (2014)] which hinder the growth of the firms.

III. Empirical Review

1. Firm Growth

Once the firm crosses the survival stage, owners – managers plan the growth of their firms in a premeditated and organized way [Claver, et al. (2006)] abstaining from losing the ownership and control [Storey (1994)]. Lewis and Churchill (1983) concept of 'success-disengagement' also refers to the firms whose owners are either not willing or maybe are unable to delegate the authority as the firm grows in size. However, the growth of firms is viewed as inevitable for the ultimate survival of the firm. Enterprises seek continuous growth by increasing or sometimes only maintaining the levels of sales and profits to guarantee their survival in the market [Aggarwal (2015)]. It is because of the vital importance of the firm growth that the number of researchers all over the world has studied firm growth from different aspects. A big deal of research is present on Gibrat's Law reviewing the relationship between firm size and firm growth. Researchers like Anton (2016) and, Oliveira and Fortunato (2006) conclude that firm's growth and size are conversely linked. Another important determinant in firm growth studies is the age of firm. Fizaine (1968) argues that causality runs from age to growth

which was further reiterated by Evans (1987), who concludes that growth rate decreases with age. Similar results are reported by Aregbeyen (2012) and, Pham and Nguyen (2017) whereas Aggarwal (2015) and, Liu and Hsu (2006) show the positive effect of age. However, the inverse nature of firm's growth with age is a robust feature. Firm growth theory place innovation as the key determinant of firm growth the empirical studies are in conclusive. Coad and Rao (2008) report that an index of innovativeness positively impacts the growth of a small number of 'superstar' firms. In contrast, the majority of the rest have shown a negative association of innovation and growth. It is because of riskiness associated with innovation and the time lag that is inherent in it before it is translated into commercial success. However, Aggarwal (2015) and Hunjra, et al. (2018) report that innovation has a significant positive impact on sales growth. Coad, et al. (2016) report R&D intensity (measuring innovativeness) to have a positive association with the firm's sales growth and that young firm are influenced more by R&D intensity than older firms. In addition to this number of researchers such as Aggarwal (2015), Anton (2016) and Hunjra, et al., (2018) report a significant healthy impact of profitability on the growth of the firms. Thus we conclude that firm growth potential is highly dependent upon the strategy planned by the owner-manager plus the policy and institutional environment within which it operates [Bishop, et al. (2009)].

2. Ownership Concentration and Firm Performance

Ownership represents power; it is a double-edged sword that can work in support or opposition of management, depending upon the level and type of concentration and how it is used [Pfeffer and Salancik (1978)]. Generally, the higher the level of concentrated ownership, the more potent would be the support or opposition. Jensen and Meckling (1976) posit that bigger and powerful shareholders have greater incentive to accomplish wealth maximization for the shareholders. However, Grosfeld and Hashi (2003) propose that concentration of ownership is determined by the degree of uncertainty in the firm's environment. Firms tend to move towards dispersed ownership as the firm's environment gets riskier. Fama and Jensen (1983) also stipulate that concentrated ownership firms have a lower level of liquidity in the market and investors' reluctance in tabbing diverse growth opportunities, leads to the high cost of capital for the concentrated ownership firms. Holmström and Tirole (1993) highlight that this lower liquidity averts; investors' attention and save managers from additional monitoring by the stock market.

La Porta, et al. (2000) and later Faccio and Lang (2002) survey the ultimate ownership and control along with the extent of concentration in the ownership structure of corporations around the world and conclude popularity of concentrated ownership structure in most of the countries of the world. Taiwan [Yeh (2003)], Poland [Dzierzanowski and Tamowicz, (2004)] and Pakistan [Cheema, (2003) and, Javid and Iqbal (2010)] also find that concentrated ownership is popular. Abbas, et al. (2013)

proclaim that 49 per cent of shares of non-financial firms are owned by large shareholders in Pakistan.

Studies have also observed contrary effect of concentrated ownership on the firm performance as controlling shareholders protect their interest over the interest of the firm and that of the minority shareholders and thus negatively affect firm performance [Wang and Shailer (2015)]. Moreover, other studies by Shan and McIver (2011) from China, Khamis, et al. (2015) from Bahrain and Wahla, et al. (2012) and Abdullah, et al. (2019) from Pakistan and also discover the same findings.

Karaca and Eksi (2012) from Turkey, Al-Matari and Al_Arussi (2016) from Oman, Abbas, et al. (2013) and Khan, et al. (2011) from Pakistan all reckon the positivity of concentrated ownership towards firm performance. Lepore, et al. (2017) and Nguyen, et al. (2015) reveal that concentrated ownership is an efficient corporate governance mechanism, especially in countries where investor protection is weak.

Based on the review of literature, it is purported that in addition to other determinants of firm growth concentration of ownership also affects the growth of the firm, which is barely investigated before. Following Villalonga and Amit (2006) it is hypothesized, that concentration of ownership reduces agency conflict between shareholders and managers and concentrated owners having sufficient ownership would seriously plan for the growth of the firm, by looking for unused resources in the firm and by searching new ventures for expansion and thus positively affect firm growth.

H_1: Concentrated ownership exerts a positive impact on the growth of firms.

IV. Data and Methodology

1. Data Collection

Pakistan stock exchange-listed large-scale manufacturing (LSM) firms are the focus of this study. Till date 391 manufacturing firms are listed on stock exchange out of which a sample of 80 firms is taken; the study covers a period of 11 years from 2006 to 2016.'Code of Corporate Governance' was implemented in the year 2002. In the initial years, many firms did not include the pattern of shareholding in their annual report; therefore, data has been collected from 2006 onwards. Published annual reports are used to collect secondary data.

2. Variables of the Study

a) Dependent Variable

Since owners of the firm are interested in the returns on their investment and growth in sales ensures higher returns; therefore, sales growth is a relevant measure

of firm growth. In line with Delmar (1997) and Çoban (2014), firm growth is measured in terms of gross sales growth which is calculated as the current year's sales minus last year's sales divided by the last year's sales, whereas sales are taken as the natural log of gross sales.

b) Independent Variable

The concentration of ownership is measured as the fraction of shares owned by largest five shareholders after [Demsetz and Lehn (1985), Demsetz and Villalonga (2001), Perrini, et al. (2008) and, Javid and Iqbal (2008)]. Besides this to check the robustness of the model; two other proxies are used such as the concentration of ownership dummy at 50 per cent level and block holder ownership, holding 10 per cent or above shareholding in a firm.

Firm-Specific variables include all the significant determinants of firm growth indicated by Aggarwal (2015). Firm-specific factors include the determinants of firm growth such as profitability, leverage, solvency, liquidity, firm size, firm age, advertisement intensity, innovation, the proportion of earnings retained and the efficiency ratio of the firm. The model also includes the dummies for all the sectors constituting the data set. The definitions of all the determinants are given in the variable's summary Table 1.

3. Estimation Technique

To study the impact of concentrated ownership on the growth of firms in Pakistan, different estimation approaches are used. The estimation took its start from pooled OLS then - since the data is the panel in nature; therefore, fixed effect and random effect models are also applied. As the endogenous nature of the ownership variable is confirmed by Demsetz and Lehn (1985), Demsetz and Villalonga (2001), Perrini, et al. (2008), Generalized Method of Moments (GMM) for panel data analysis is also applied following Phung and Mishra (2016). To address the cross-section dependency Feasible Generalized Least Square (FGLS) and finally enhanced model of Panel Corrected Standard Error (PCSE) is also utilized. All these models are reported for comparison purpose and to strengthen the findings.

4. Methodology

The main focus of the study is to analyze whether concentration of ownership enhances firm's growth? It is predicted that the alignment effect works in concentrated ownership firms and managers work under direct guidance and supervision of the owners. Concentrated ownership curbs the opportunistic behaviour of mangers and they show better performance in terms of sales growth. The literature suggests that a set of

TABLE 1

Summary of Variables

Variables	Label	Description	Reference
Dependent Variables			
Sales Growth Relative	SGR	Ln Gross Sales for the year – Ln gross sales for the previous year / Ln sales for the previous year	Çoban (2014) Delmar (1997)
Independent Variables			
Ownership Variables			
Concentrated Ownership (%)	COW	The fraction of shares owned by the five largest shareholders together	Perrini, et al., (2008)
Concentrated ownership dummy	COW 50	Dummy variable that equals one if the controlling shareholder has more than 50 per cent of the shares	Perrini, et al., (2008)
Block holders	Block 10	The fraction of shareholding for 10 per cent or more than 10 per cent	
Firm-Specific Variables			
Profitability	PRO	ROE	Aggarwal (2015)
Leverage	LEV	Total Debt / Total Asset	Aggarwal (2015)
Liquidity	LIQ	Weight of cash and cash equivalent on current liabilities	Aggarwal (2015)
Solvency	SOL	Current assets/current liabilities	Aggarwal (2015)
Firm Size	SZ	Log of Total Assets	Aggarwal (2015)
Firm Age	AGE	No. of years firm is in the business	Aggarwal (2015)
Innovation	INN	Expenses on R&D	Aggarwal (2015)
Advertising Intensity	ADVI	The ratio of advertising and marketing expenses to net sales	Aggarwal (2015)
Retention Ratio	RR	1 – Dividend Payout Ratio	Aggarwal (2015)
Efficiency Ratio	ER	Asset Turnover Ratio = Net Sales/Avg. Total Assets	Aggarwal (2015)

Source: Authors' estimation.

other explanatory variables have a positive impact on firm growth as well, such as advertising intensity, innovation, the proportion of earnings retained and efficiency ratio. Other firm characteristics such as age, size, leverage, profitability, liquidity and solvency also play a role in promoting the growth of the firm.

5. Model Specification

The test on whether the concentration of ownership has an impact on the growth of firms in Pakistan, this paper extends and modifies the model of Perrini, et al. (2008). Firm growth is taken as the dependent variable in place of firm performance and few determinants specific to firm growth are added such as advertising intensity, innovation, the proportion of earnings retained and efficiency ratio. It is predicted that the alignment effect works in concentrated ownership firms and managers work under direct guidance and supervision of the owners. Therefore, it curbs their opportunistic behaviour and mangers show better performance in terms of sales growth.

$$\text{Growth}_{it} = \alpha_0 + \beta_1 \text{Cow}_{it} + \sum^{n}_{i=0} \beta_i \text{ Firm Specific Factors}_{it} + \varepsilon_{it} \quad (1)$$

$$\begin{aligned} \text{Growth}_{it} = {} & \alpha_0 + \beta_1 \text{COW}_{it} + \beta_2 \text{PRO}_{it} + \beta_3 \text{LEV}_{it} + \beta_4 \text{LIQ}_{it} + \beta_5 \text{SOL}_{it} \\ & + \beta_6 \text{SZ}_{it} + \beta_7 \text{AGE}_{it} + \beta_8 \text{INN}_{it} + \beta_9 \text{ADVI}_{it} + \beta_{10} \text{RR}_{it} + \beta_{11} \text{ER}_{it} \\ & + \beta_{12} \Sigma \text{INDDUMMY}_{it} + \varepsilon_{it} \end{aligned} \quad (2)$$

V. Results and Discussion

The empirical results and discussion are presented in this section. The analysis begins with summary statistics of the data and after that panel data regression results are reported.

1. Descriptive Statistics and Correlation Analysis

Summary statistics of the variables are reported in Table 2, which includes the mean, standard deviation, minimum and maximum values of the variables. From the sample of 80 manufacturing firms listed on the Pakistan Stock Exchange, the descriptive statistics show only three variables with high standard deviation. Concentrated ownership ranges from a minimum of 16.97 per cent to 99.24 per cent, which is very high. Then profitability also has high range, from -19.142 to 55.212, which is depicted in its high standard deviation of 17.291 as well. Lastly, age of the firms also has a wide gap. New firms are as old as five years, whereas mature firms stand at the age of 155 years. In this situation, it is tough for new firms to compete with the old firms since they carry their legacy and also has developed a momentum based on their knowledge,

TABLE 2

Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
Growth	15.559	1.608	8.09	18.029
COW	67.468	18.109	16.97	99.241
COW 50	0.801	0.399	0	1
BLOCK 10	0.477	0.258	0	0.988
PRO	16.35	17.291	-19.142	55.212
LEV	0.492	0.215	0.071	1.005
LIQ	0.253	0.347	0	1.284
SOL	1.804	1.247	0.212	5.599
SZ	6.717	0.648	5.063	8.217
AGE	38.525	22.628	5	155
INN	0.001	0.007	0	0.048
ADVI	0.013	0.024	0	0.097
RR	0.662	0.338	-0.275	1.257
ER	1.386	0.845	0	3.865

Source: Authors' estimation.

experience and goodwill in the market. Furthermore, firms also show great variation in their liquidity position measured in terms of cash over current liabilities, their solvency calculated as current ratio and efficiency ratio measured in terms of asset turnover. This situation reflects the fact that firms perform differently in the same market environment, and perhaps this is because of the ownership structure they hold.

Correlation Matrix Table 3 shows the association among the variables. Except for the size with firm growth which is highly correlated, all other variables show a weak correlation among each other.

2. Results of Regression Analysis

Empirical results of the impact of concentrated ownership on firm growth using different estimation techniques are presented in Table 4. Testing of hypothesis initiated with applying pooled OLS model, regressing concentrated ownership and firm-specific variables on the growth of the firm. The model explains 80.41per cent variation in the dependent variable and is overall a good fit. The results suggest that concentrated ownership has a significant positive impact on the growth of the firm's sales. The result supports the hypothesis that concentrated ownership exerts a positive in-

TABLE 3

Correlation Matrix

	GR	PRO	LEV	SOL	LIQ	SZ	ADVI	INN	RR	ER	AGE	COW
GR	1.000											
PRO	0.351	1.000										
LEV	-0.202	-0.079	1.000									
SOL	0.174	0.157	-0.751	1.000								
LIQ	0.226	0.206	-0.441	0.571	1.000							
SZ	0.678	0.241	-0.099	0.083	0.146	1.000						
ADVI	-0.004	0.126	0.061	-0.017	0.054	-0.149	1.000					
INN	0.197	0.159	-0.163	0.253	0.219	0.278	-0.046	1.000				
RR	-0.31	-0.445	0.265	-0.282	-0.248	-0.141	-0.172	-0.166	1.000			
ER	0.29	0.314	-0.091	0.117	0.172	-0.149	0.339	-0.097	-0.268	1.000		
AGE	-0.042	-0.013	-0.049	0.071	0.071	-0.069	0.218	-0.004	-0.013	-0.027	1.000	
COW	0.196	0.164	0.147	-0.016	0.103	0.111	0.087	0.098	-0.087	0.206	0.051	1.000

Source: Authors' estimation.

fluence on the growth of the firms. More is the concentration of ownership higher would be the growth. Ownership represents a source of power that can work in support or opposition of management, depending upon the level and type of concentration and how it is used [Pfeffer and Salancik (1978)]. Under concentrated ownership, structure owners take an active part in the management affairs, and managers work in alignment with owners' objective targets. Agency theory also posits that concentrated ownership results in better and effective monitoring, thus helps alleviate the conflict of interest phenomenon between the value-maximizing shareholders and self-interested managers – alignment effect. Jensen and Meckling (1976) further extend that large shareholders have sufficient incentive and possess enough power so that they can ensure wealth maximization for the shareholders. Penrose believes that the growth of the firm is dependent upon the people running the organization. Delmar and Wiklund (2008) state that growth intention of the entrepreneurs (owners/shareholders), positively impacts the growth of the firm.

As far as the firm specific factors are concerned, leverage, size, advertising intensity, innovation, retention ratio and efficiency ratio have significant impact on the growth of the firm. The negative relationship depicted by innovation, advertising intensity and retention ratio rests on the riskiness associated with it embedded with time lags before it is translated into real sales growth. Innovation has been revealed to have mixed results, but Coad and Rao (2008) report that except for some superstar firms, generally, innovation expense has a negative relationship with firm growth. Leverage also has a negative relationship with firm growth which means that high levered firms

TABLE 4

Results of Impact of Ownership Concentration on Firm Growth

Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Independent Variables	POOLED OLS	FE Model	RE Model	GMM Model	FGLS Model	PCSE Model
Lag1 Sales growth				0.153***		
				(2.56)		
COW	0.0043***	0.0135***	0.0059***	0.145**	0.0043***	0.0044***
	(2.85)	(4.71)	(2.90)	(5.14)	(2.89)	(2.57)
PRO	-0.0013	-0.0006	-0.0003	-0.0013	-0.0013	-0.0013
	(-0.76)	(-0.38)	(-0.025)	(-0.86)	(-0.78)	(-0.57)
LEV	-0.584***	-0.223	-0.605***	-0.087	-0.584**	-0.584***
	(-3.11)	(-1.08)	(-2.95)	(-0.38)	(-3.16)	(-2.59)
LIQ	0.0381	-0.012	0.012	0.008	0.038	0.0381
	(0.41)	(-0.14)	(0.12)	(0.11)	(0.48)	(0.68)
SOL	-0.008	0.011	0.003**	0.007	-0.0083	-0.008
	(-0.24)	(0.32)	(0.09)	(0.19)	(-0.24)	(-0.26)
SZ	1.90***	0.659***	1.51***	0.417***	1.90***	1.901***
	(37.95)	(9.41)	(24.64)	(6.53)	(38.52)	(10.21)
AGE	0.0012	0.072***	0.0026	0.066***	0.0012	0.0012
	(0.96)	(11.31)	(1.36)	(8.27)	(0.97)	1.62)
INN	-0.082**	-0.063	-0.076	0.036	-0.082**	-0.082***
	(-1.66)	(-0.66)	(-1.13)	(0.39)	(-1.69)	(-4.35)
ADVI	-0.033***	-0.011	-0.032**	-0.021	-0.033***	-0.033***
	(-2.35)	(-0.50)	(-1.83)	(-0.9)	(-2.38)	(-3.24)
RR	-0.347***	-0.155**	-0.317*	-0.019	-0.347***	-0.347***
	(-3.90)	(-1.86)	(-3.5)	(-0.21)	(-3.96)	(-3.47)
ER	0.821***	0.779***	0.815***	0.771***	0.821***	0.821***
	(20.99)	(15.51)	(17.51)	(15.26)	(21.30)	(24.73)
Const	1.602***	6.60***	4.077***	5.76***	1.60***	1.602
	(4.02)	(12.20)	(8.52)	(6.90)	(4.09)	(1.28)
Ind Dummy	Yes	Yes	Yes	Yes	Yes	Yes
F Stat (P>F)	107.7***	58.69***	1612.67***			
Wald Ch^2				648.89***	3611.22***	70600.9***
R^2	0.8041	0.7521	0.7939			0.8041
Hausman Test	87.56***					

Source: Authors' estimation.

Note: *, **, *** represent the p values significant at 10%, 5% and 1% respectively. Figures in brackets are t-values.

carry bankruptcy risk with them along with the cost of interest expense which hinders firm growth [Chow and Wong-Boren (1987)]. Leverage results are in line with Aggarwal (2015).

Size of the firm and the efficiency ratio has shown a significant positive impact on the growth of the firm. Claver, et al. (2006) state that bigger firms shows higher growth. It is because bigger firms have more resources and work at economies of scale that enable the firm to reach more customers than their smaller counterparts in the market. This result is in line with Aregbeyen (2012) and Hunjra, et al. (2018). Efficiency ratio positively impacts the firm growth reflecting that firms with higher asset turnover are more efficient as they work with reduced operational cost and easily achieves sales growth with higher production, this is also in harmony with Aggarwal (2015) and Claver, et al. (2006).

As the data set is a panel in nature; therefore, panel data regression is applied with fixed effect and random effect. However, the Hausman test reveals that the fixed effect is pertinent to the data set that is used. For the sake of comparison, both the fixed effect and random effect are given in Table 4. The studies on ownership structure have confirmed the endogenous nature of the ownership variable [Demsetz and Villalonga (2001) and Perrini, et al. (2008)]. The conclusion that firm performance gives a lead to the ownership structure, including other factors implies endogeneity and failing to address is bound to reveal biased results [Demsetz and Villalonga (2001)]. Situations where firm performance behaves dynamically, fixed effect approach results in biased and inconsistent results [Wooldridge (2013)]. Therefore Generalized Method of Moments (GMM) for panel data analysis is the most appropriate [Phung and Mishra (2016)].This study employs a system GMM approach suggested by Arellano and Bond (1991) and modified by Blundell and Bond (1998) to examine the subject matter. GMM results also support the significant positive impact of concentrated ownership on the growth of the firms. GMM results also show a significant impact of firm size, firm age and efficiency ratio on the growth of the firm.

Furthermore, cross-section dependency is also checked by applying Pesaran Test and Modified Wald test is utilized to check the group-wise dependency, both tests confirm the presence of dependency in the data set. Then Wooldridge test for autocorrelation in panel data is applied and it confirms the presence of the first-order autocorrelation. After these tests, the results taken by Pooled OLS, Fixed Effects and GMM becomes biased and controversial. However, GMM is a dynamic estimator that can correct both heteroskedasticity and serial correlation issues but cannot handle the cross-sectional dependence. Therefore, GLS is a better estimator that can correct for hetero, serial correlation and cross-sectional dependence. So, Parks' Feasible Generalized Least Square (FGLS) estimation method [Parks (1967)] is applied to get efficient estimators but since FGLS is only feasible when $t \geq n$ and as recommended by Beck and Katz (1994) Panel Corrected Standard Error (PCSE) performs substantially better therefore both FGLS and PCSE are applied to test the impact of concentration

of ownership on the growth of the firms. The results of FGLS and PCSE both confirm the significant positive impact of concentrated ownership with almost the same coefficient values at 5 per cent and 1per cent significance level.

Quite similar to Pooled OLS, the firm specific variables, including leverage, size, innovation, advertisement intensity, retention ratio and efficiency ratio, exert a significant impact on the growth of firms. The results confirm the hypothesis and are in line with the previous researches, but this study discusses the results with a unique combination of Agency Theory and Penrose Theory of the Growth of the Firms.

3. Robustness Check

To check the robustness of the results, two other proxies of concentrated ownership are examined, the results of which appear in Table 5. First is the block holder concentration, which refers to the fraction of shareholding owning 10 per cent or more proportion of shares and thus forms a block to exercise their voting right in the board of directors' meeting. This is slightly different from the previous measure as here we take all the shareholders that hold 10 per cent or above shareholding no matter whatever is the maximum limit. Whereas in the previous measure, we have taken the number of shareholdings owned by five largest shareholders after Demsetz and Villalonga (2001) and Perrini, et al. (2008). The second measure that is used to scan the vitality of the model is by taking a dummy of concentrated ownership at a 50 per cent level. Under both the proxies, the results are estimated under FGLS and PCSE as these are better estimators under hetero, auto and cross-sectional dependence. Under FGLS, both concentrated ownership proxies are positive and significant, whereas under PCSE only block holder concentration is positive and significant at 1 per cent.

VI. Conclusion and Directions for Future Research

The present study was aimed to examine the impact of concentrated ownership on the growth of the manufacturing firms listed on Pakistan Stock Exchange 2006 – 2016. The number of panel data estimation techniques is applied and all the estimation results verify the positive and significant impact of concentrated ownership on the growth of sales of firms in Pakistan. These results are in line with Penrose 'Theory of the Growth of the Firms' that says that growth of the firm depends upon the quality of people running the organization and owners with power and influence work in a better way to make the firm grow. According to Agency Theory, concentrated ownership means tight monitoring which curbs the opportunistic behaviour of the mangers –the alignment effect and hence results in firm growth. So, the study concludes that concentrated owners are motivated and possess the power to influence the opportunistic behaviour of the managers and carry long term vision of the firm that leads to firm growth. Among other variables, leverage, advertising inten-

TABLE 5

Robustness Check

Variables	Block holder 10%		Concentrated Ownership Dummy 50%	
Independent Variables	FGLS Model	PCSE Model	FGLS Model	PCSE Model
COW 50%			0.177	0.0523
			(2.10)**	(0.74)
BLOCK 10	0.291	0.3552		
	(1.66)*	(3.00)***		
PRO	-0.006	0.00158	-0.0035	-0.0011
	(-2.22)**	(-0.65)	(-1.4)	(-0.5)
LEV	-1.109	-0.547	-0.736	-0.502
	(-3.05)***	(-2.66)***	(-2.05)**	(-2.35)***
LIQ	0.013	0.318	-0.045	0.046
	(0.13)	(0.56)	(-0.46)	(0.83)
SOL	-0.137	-0.0046	-0.111	-0.0034
	(-2.67)***	(-0.15)	(-2.14)**	(-0.11)
SZ	2.05	1.896	2.108	1.922
	(19.86)***	(10.16)***	(23.99)***	(10.16)***
AGE	0.0013	0.0009	0.0021	0.0013
	(0.66)	(1.19)	(1.06)	(1.71)*
INN	-0.071	-0.069	-0.104	-0.079
	(-1.8)*	(-3.88)***	(-2.54)***	(-3.61)***
ADVI	-0.069	-0.028	-0.086	-0.034
	(-3.31)***	(-2.63)***	(-4.04)***	(-3.27)***
RR	-0.1174	-0.349	-0.1639	-0.356
	(-1.1)	(-3.53)***	(-1.62)*	(-3.54)***
ER	0.785	0.831	0.776	0.834
	(14.34)***	(24.59)***	(14.41)***	(24.48)***
Const	1.249	1.706	0.738	1.655
	(1.83)*	(1.38)	(1.15)	(1.27)
Ind Dummy	Yes	Yes	Yes	Yes
Wald Ch^2	2014***	128158***	2025.09***	128312***
R^2		0.804		0.8023

Source: Authors' estimation.

Note: *, **, *** represent the p values significant at 10%, 5% and 1% respectively. Figures in brackets are t-values.

sity, innovation and retention ratio have negative while firm size, age and efficiency ratio have a positive impact on the growth of the firm.

The study has a practical implication for stakeholders, particularly investors and policymakers, in understanding the role of concentrated ownership on the growth of the firms in Pakistan. Although monitoring role of concentrated ownership is exerting favourable impact on firm growth of manufacturing firms but increase in concentration leads to entrenchment and expropriation effects and SECP should take measures to protect the interests of the minority shareholders.

The study is limited to non-financial - manufacturing firms, and the future researchers may incorporate the financial sector as well for their study. The study solely focuses on the concentrated ownership dimension of the firm's ownership structure; however, further research is needed in all other dimensions of ownership such as foreign ownership, institutional ownership state ownership and their impact on firm growth.

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