DOES OWNERSHIP STRUCTURE EFFECT CAPITAL STRUCTURE AND FIRM PERFORMANCE?

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ABSTRACT
The purpose of this research is to find the impact of managerial and institutional ownership on the performance and capital structure decisions of the organization due to the control and agency problem. The data in our sample consists of 53 manufacturing companies listed at Karachi Stock Exchange (KSE), of which 20 companies are from cement, 25 from chemical and 8 companies are from pharmaceutical sector. The time horizon of the data ranges from 2000 to 2010. Correlation and panel regression models are used to determine the relationship between capital structure and performance of the firm with managerial and institutional ownership. Four proxies for measure of performance of the firm are used; three for capital structure and three types of ownership are included. Results indicate that there is a negative relationship between performance and managerial and institutional ownership and similarly capital structure is also having a negative relationship with managerial ownership and institutional ownership.

Keywords: ownership structure; capital structure; firm’s performance
1. INTRODUCTION

Insidious prevalence of agency problem and the consequent impact observed on corporate performance attracts lot of attention in corporate finance literature. The agency theory puts forward the ownership structure as control mechanism to improve corporate economic efficiency (Jensen and Meckling 1976). Since then we observe a lot of research in corporate finance considering impact of ownership structure on capital structure and/or corporate performance. Researchers suggest severance of corporate ownership and management, and alignment of interest of the owners and managers to resolve agency conflict.

All these types of ownership structures are prevailing in different organizations across the world but my focus is concerned in determining only the impact of management and institutional ownership because individual owners are not involved in decision-making processes so cannot take any decision that may affect the performance of the organization. While family ownership is prevailing in almost all sectors in all over the Pakistan so its impact would be no more distinguishable in our scenario. In case of public vs. private ownership, researches have proved that in almost all over the world performance of private organizations is greater than the public organization. Therefore, I am interested to study the influence that management and institutional ownership may have on the performance of the organizations as well as on their capital structure decisions.


The basic purpose of this paper is to find the influence of management and institutional ownership prevailing in Pakistani organizations in terms of performance as well as borrowing decisions of the organizations. The objective is to find out whether shareholding concentration is influencing the financing decision of an organization or not and if effecting then in what direction these decisions are affected. In addition to capital structure the impact of these different ownership structures on
firm performance is also the focus that is based on the “congruence of interest hypothesis” which states that management shareholding would result in alignment of interests of management and shareholders and ultimately the entire organization which would help to reduce the agency cost by avoiding the agency problem and will help to improve the performance of whole organization. However, if the management shareholding is increased then another problem may arise based on the “entrenchment hypothesis” which states that increase in management shareholding may result in internal takeover so management shareholding should be increased up to a particular level not more than that. So for that multiple regressions are used to determine the influence. Remaining section of this paper is organized in this way; section two deals with literature review, section three with research methodology, section four with data analysis and finally section five with conclusion and recommendations.

2. LITERATURE REVIEW

Severance of ownership and management in firms creates the principal-agent problem which results in cost of monitoring that ultimately leads to the reduction of firm performance. Considering the financing decisions, managers may borrow not only for firm’s productive use but may also borrow for non-productive use like lush offices. As such, agency theory presents higher leverage as a tool to reduce cash availability for non-productive use and improve firm performance (Jensen and Meckling 1976).

Researchers present ownership structure as a tool to help control agency problem and improve the firm performance. There are two competing hypotheses that link ownership structure, capital structure and firm performance; convergence-of-interests hypothesis, and entrenchment hypothesis. The proponents of convergence-of-interests hypothesis argue that an increase in managerial shareholding may align the interests of the management and owners to reduce this conflict and agency cost consequently increasing firm performance by linking monetary incentives of management with other shareholders thereby reducing the agency problem. But researchers advocating entrenchment hypothesis dispute the intuitive outcome of interest alignment to suggest a likely counterintuitive upshot of entrenchment. They argue that intense managerial ownership may have negative impact on firm performance due to two reasons: First, low probability of takeover provides more entrenchment to the poor managers resulting in reduction of firm performance (Stulz 1990); Second, self-fulfilling actions of controlling shareholders maximizing their personal goals may lead to less effective corporate policies and practices (Shleifer and Vishny 1986; Mørck et al. 1988). Having greater ownership, the managers may not prefer further equity financing to avoid dilution of their concentration and ultimately their control, so large management ownership would prefer to use the debt financing as compared to equity financing. However if debt financing
brings larger monitoring from outside, the management would prefer less debt to avoid losing control (Jensen and Meckling 1976; Fama and Jensen 1983). Empirical evidence suggests that firms with greater concentration of managerial ownership prefer to rely on debt rather than issuing equity to avoid dilution of their control (Céspedes et al. 2010). Theoretical and empirical evidence imply a positive relationship between debt financing and managerial ownership concentration.

Information asymmetry also plays an important role about the outsourcing decision, because managers inside the organization have better information about position of the organization so if they will raise the funds through issuing the shares then it will signal negatively to the market that would result in declining the market price of the company, and if the management has the interest in the form of ownership in an organization then it would try to avoid this negative signaling by meeting the financing requirements through debt financing and at the same time not losing the value of the firm through underpricing (Myers and Majluf, 1984).

Harris and Raviv (1988) has determined that debt can serve as a disciplining device because if the firm defaults then it would result in liquidation of the firm which may result in losing the jobs of managers so managers would also work in finest interest of the firm. Harris & Raviv (1988) have also said, “A higher leverage will reduce the price of equity. With the same amount of fortune, the manager would be able to purchase more equity and thus gain more control over the firms”.

Brailsford et al. (2002) has given a mixed view about the relationship between managerial shareholding and debt financing. He determined that at the lower level of managerial shareholding, agency conflict between the management and shareholders would focus the use of more debt while at the same time when insiders become more ingrained at high levels of insider ownership they try to find ways to minimize the risk of default and they utilize less borrowing.

A negative relationship between debt and insider ownership has been found (Friend, Irwin and Lang, 1988) while at the same time Kim and Sorensen (1986) has determined a positive relation between them. Anderson and Reeb (2003) have determined that “increasing managerial ownership by managers or families has no effect on capital structure decision of an organization”.

Stulz (1988) has determined that “firms with management shareholders will prefer to use higher leverage because it enhances their voting control for a particular level of equity investment, and also reduces the risk of a takeover”.

Institutional shareholding is positively affecting the capital structure of an organization, and this positive relationship is due to the efficient monitoring which helps to reduce the agency cost and managerial opportunism. King and Santor (2008) have reported, “Both families owned firms and firms that are controlled by financial institutions carry more debt in their capital structure”.
Institutional presence in ownership structure may significantly improve monitoring of managers and ultimately reduce the agency problem. Empirical evidence suggests a strong negative relationship between firm’s leverage and its institutional ownership. This determines. Size of shareholding by institutional investors is significantly negatively linked to capital structure and return on equity of the organization as compared to those firms that are lightly held (Chaganti & Damanpour, 1991, Grier & Zychowicz, 1994, Bathala et al., 1994, Crutchley & Jensen, 1996). Firms with high concentration of institutional shareholding have relatively low leverage and high return on equity.

Hypothesis I: Managerial ownership has a positive association with borrowing decision of the organization

Hypothesis II: Institutional ownership has a negative association with borrowing decision of the organization

There are two hypothesis concerning the association between institutional ownership and firm performance, which include strategic alliance hypothesis, and efficient monitoring hypothesis.

Strategic alliance hypothesis; it states that institutional owners and insider owners find it equally valuable for the organization to collaborate with each other on matters which equally influence them but usually it is believed that institutions become unsuccessful to perform an effective monitoring role when they are in these sort of alliances with insiders.

Efficient monitoring hypothesis; it states that large shareholding by institutions creates a superior encouragement to check management and they can do it easily with the help of monitoring expertise and still incurring cost that can be compensated through the benefits obtained form that monitoring.

Institutional management followers states that institutional investors increase corporate competence in two ways. First, “institutional investors perform quality research in identifying efficient firms for investing their funds, thus resulting in most efficient use of their limited capital”. Lang et al. (1989) and Servaes (1991) have provided the evidence that “gains of efficient bidders are more than inefficient bidders, represented positive relationship between the bidders’ gains and institutional ownership”. Second, according to institutional followers, “large institutional shareholding in public sector firms provides strong economic incentives for institutional investors to monitor the activities of managers”.

According to these researchers, (Jensen & Meckling, 1976, Shleifer & Vishny, 1986, Jiraporn & Gleason, 2007) block owners are more competent of monitoring and associating insider interests to their objectives so their ownership deliberation would be anticipated to have a positive outcome on firm performance. Fama and Jensen (1983) stated, “Increased ownership share may adversely affect
performance because it raises the firm’s cost of capital due to decreased market liquidity or decreased diversification opportunities”.

Antonio and Juan Francisco (2007) find a “non-significant relationship between the institutional ownership and firm value. Cornett et al. (2004) stated that “relation of institutional ownership and corporate performance confirm a significant positive relationship between firm’s operating cash flow and institutional ownership”. Institutional investors can actively participate in the corporate control and decision-making processes of the organization.

Friend and Lang (1988) suggested that” institutional investors have incentives to monitor and influence management to protect their investments”. Their close monitoring directs the managers to take decisions in the benefit of owners of the firm.

Huson Joher, Mohd Ali findings indicate that there is a huge collision of institutional ownership, which serves as a monitoring tool to condense the agency problem between owner and principal.

Based on this existing literature the following hypothesis can be established;

Hypothesis III: Managerial ownership has a positive association with performance of the organization

Hypothesis IV: Institutional ownership has a positive association with performance of the organization.

3. DATA DESCRIPTION AND METHODOLOGY

Considering the paucity of ownership structure data we limit our sample to 53 firms listed at Karachi Stock Exchange (KSE). The firms belong to three manufacturing sectors: 25 from chemical sector, 20 from cement sector, and remaining 8 from pharmaceutical sector. The time horizon of our data is from 2000 to 2010. We use pooled panel cross-section regression analysis to get the maximum possible observation and efficient results using sectors as cross-section and years as period. We consider three main variables of interest: ownership structure being the independent variable, and capital structure and firm performance being the dependent variables.

The general form of the panel regression model is

\[ y_{it} = \alpha + X_{it}'\beta + \mu_{it} \]

\[ i = 1,2,\ldots,N; t = 1,2,\ldots,T \]

Where subscript \( i \) and \( t \) represent the sectors and time respectively, \( y \) represents dependent variable which is performance and debt level of the organization, \( \alpha \) is a scalar, \( \beta \) is \( K \times 1 \) and \( X_{it} \) is the \( it^{th} \) observation on \( K \) explanatory variables.

We present below the general equations, Eq. 1 to 3, we use to estimate the relationship among ownership structure, performance and capital structure choices.

\[ P = f (MO, IO, OT, CS, Size, Growth, Age, Tax Shield) \]
\[ P = f(MO, IO, OT, CS, Size, Growth, Age, Tax Shield, DR, LDER, SDER) \] ..........(2)

\[ CS = f(MO, IO, OT, CS, Size, Growth, Age, Tax Shield) \] ..............................................(3)

Where \( P \) is firm performance, \( CS \) indicates capital structure of the firm, \( DR \) depicts debt ratio, \( MO \) management ownership, \( IO \) institutional ownership, \( OT \) for others ownership.

In Model 1, we take performance as dependent variable while ownership structure along with size, growth, age and tax shield are the independent variables. In Model 2, we take firm performance as dependent variable while ownership structure and capital structure are the independent variable along with other independent variables. Finally in Model3, we consider capital structure as dependent variable, while ownership structure along with size, growth, age and tax shield as the independent variables. We use the fixed effect estimation techniques of panel data models as we have a specific set of \( N \) companies.

We use three basic forms of ownership structure, our main independent variable: managerial ownership (MO), institutional ownership (IO), and small shareholders taken as others ownership (OT). We use percentage of shares held by each of these forms of ownership. For the capital structure we use debt ratio (DR) calculated by dividing total liabilities by total assets which is considered more appropriate in Pakistani context (Qureshi 2009; Sheikh and Wang 2011). For the firm performance we use four proxies: return on asset (ROA) calculated by dividing net income by total assets, return on equity (ROE) calculated by dividing net income by shareholders equity, Tobin’s Q (TQA) calculated by dividing average market value of equity by total assets, and operating profit margin (OPM) calculated by dividing operating profit by sales.

In addition we use some other independent variables that are reported to influence the firm debt level and performance in Pakistani context, these include: Size – the firm size is helpful in determining performance as well as capital structure decisions of the organizations (Qureshi 2009; Sheikh and Wang 2011). We use natural log of sales to measure firm size; Growth – literature suggests growth as a determinant of firm performance and debt (Qureshi 2009). We take the difference of sales of this year to previous year divided by sales of previous year as a proxy of growth; Age – older firms may become stable, reputable and creditworthy which influences their performance and capital structure (Awan et al. 2010). It is measured by the number of years from listing at KSE; Tax – even though we do not find any evidence indicating tax as a debt or performance determinant in Pakistani yet considering plausibility of trade-off theory arguments we incorporate this in our study and calculate it by dividing the taxes by earnings before interest and taxes.

4. RESULTS AND THEIR DISCUSSION
We present the correlation matrix of the variables of interest.
Table 1: Correlation Matrix

<table>
<thead>
<tr>
<th>Variables</th>
<th>TQA</th>
<th>ROA</th>
<th>OPM</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-14.571 (-0.767)</td>
<td>-10.597 (-3.68)</td>
<td>-54.062 (-4.98)</td>
<td>-18.119 (-1.951)</td>
</tr>
<tr>
<td>SIZE</td>
<td>11.346 (5.568)**</td>
<td>1.628 (5.277)**</td>
<td>8.776 (5.74)**</td>
<td>3.571 (3.583)**</td>
</tr>
<tr>
<td>GROWTH</td>
<td>-0.036 (-0.54)</td>
<td>0.024 (2.317)**</td>
<td>0.008 (0.21)</td>
<td>0.027 (0.819)</td>
</tr>
<tr>
<td>AGE</td>
<td>1.691 (7.16)**</td>
<td>0.082 (2.28)**</td>
<td>-0.191 (-1.41)</td>
<td>-0.087 (-0.762)</td>
</tr>
<tr>
<td>TS</td>
<td>0.065 (1.04)</td>
<td>0.025 (2.59)**</td>
<td>0.001 (0.02)</td>
<td>0.038 (1.260)</td>
</tr>
<tr>
<td>MO</td>
<td>-0.527 (-3.58)**</td>
<td>-0.013 (-0.577)</td>
<td>0.043 (0.51)</td>
<td>-0.018 (-0.259)</td>
</tr>
<tr>
<td>IO</td>
<td>-0.416 (-1.64)</td>
<td>0.102 (2.65)**</td>
<td>0.234 (1.61)</td>
<td>0.194 (1.564)</td>
</tr>
<tr>
<td>OT</td>
<td>-0.414 (-2.96)**</td>
<td>0.008 (0.39)</td>
<td>0.029 (0.37)</td>
<td>0.016 (0.247)</td>
</tr>
</tbody>
</table>

R² | 0.32 | 0.22 | 0.16 | 0.08 |
Adj-R² | 0.30 | 0.20 | 0.15 | 0.06 |
P-Value | 0.000 | 0.000 | 0.000 | 0.000 |

(F-Statistics)

*P<0.1, **P<0.05, ***P<0.01 and t-values are in parenthesis

Table 2: Relation of Performance with ownership structure and control variables (not sure)

<table>
<thead>
<tr>
<th>Variables</th>
<th>TQA</th>
<th>ROA</th>
<th>OPM</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>35.263 (2.198)</td>
<td>1.635 (0.585)</td>
<td>-33.88 (-3.35)</td>
<td>-13.16 (1.270)</td>
</tr>
<tr>
<td>SIZE</td>
<td>8.220 (5.311)**</td>
<td>1.063 (3.834)**</td>
<td>6.085 (5.869)**</td>
<td>3.524 (3.373)**</td>
</tr>
<tr>
<td>GROWTH</td>
<td>-0.042 (-0.65)</td>
<td>0.015 (1.593)</td>
<td>0.012 (0.335)</td>
<td>0.029 (0.925)</td>
</tr>
<tr>
<td>AGE</td>
<td>1.493 (7.171)**</td>
<td>0.094 (3.017)**</td>
<td>0.022 (0.265)</td>
<td>-0.116 (-1.03)</td>
</tr>
<tr>
<td>TS</td>
<td>0.067 (1.222)</td>
<td>0.023 (2.585)**</td>
<td>0.023 (0.806)</td>
<td>0.034 (1.126)</td>
</tr>
<tr>
<td>MO</td>
<td>-0.616 (-4.96)**</td>
<td>-0.027 (-1.345)</td>
<td>0.063 (0.944)</td>
<td>-0.012 (-0.17)</td>
</tr>
<tr>
<td>IO</td>
<td>-0.179 (-0.75)**</td>
<td>0.067 (2.939)**</td>
<td>0.315 (2.935)**</td>
<td>0.137 (1.153)</td>
</tr>
<tr>
<td>OT</td>
<td>-0.461 (-3.57)**</td>
<td>-0.0001 (-0.01)</td>
<td>0.019 (0.383)</td>
<td>0.035 (0.535)</td>
</tr>
<tr>
<td>DR</td>
<td>-0.392 (-5.07)**</td>
<td>-0.121 (-9.99)**</td>
<td>-0.119 (-2.93)**</td>
<td>-0.064 (-1.56)</td>
</tr>
</tbody>
</table>

R² | 0.39 | 0.39 | 0.15 | 0.087 |
Adj-R² | 0.38 | 0.38 | 0.13 | 0.064 |
P-Value | 0.000 | 0.000 | 0.000 | 0.000 |

(F-Statistics)

*P<0.1, **P<0.05, ***P<0.01 and t-values are in parenthesis

Table 3a: Relation of Performance with ownership structure, capital structure and control variables

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Debt financing brings larger monitoring from outside, so management prefers less debt because they prefer lower risk and greater flexibility. From monitoring perspective, we find that management ownership has a negative impact because it leads to less external oversight.

**DISCUSSION**

Table 4: Relation of capital structure with ownership structure and control variables  → (not sure)

**DISCUSSION ABOUT RESULTS**

From a monitoring perspective, we find that management ownership has a negative impact because debt financing brings larger monitoring from outside, so management prefers less debt because they prefer lower risk and greater flexibility.
don’t want to lose their controlour results are consistent with the findings of (Jensen and Meckling, 1976 & Fama and Jensen, 1983, Friend, Irwin and Lang, 1988). Moreover, in the context of default risk our results are consistent with Brailsford et al. (2002) who determine that when insiders become more ingrained at high levels of insider ownership they try to find ways to minimize the risk of default and they utilize less borrowing.

If we talk about the second hypothesis then our results are consistent with Basil and Peter Taylor (2008) they have indicated that “there is strong negative relationship between leverage of the firm and the institutional ownership of the organization. (Chaganti & Damanpour, 1991, Grier & Zychowicz, 1994, Bathala et al., 1994, Crutchley & Jensen, 1996) have determined that size of shareholding by institutional investors is significantly negatively linked to capital structure and return on equity of the organization as compared to those firms that are lightly held.

Our results about the third hypothesis support the finding of (Shleifer and Vishny, 1986; Morck et al., 1988; Anderson and Reeb, 2003) based on the believe that controlling shareholders may take the actions that maximize their personal goals fulfillment but it leads to less effective policies and practices for the firm, such as the consumption of perquisite, paying themselves more salaries and appointment of family members to management positions over better-qualified external candidates.

Charles and Glenn Hubbard (1999) have interpreted that there exists negative relationship between high levels of insider ownership and performance due to entrenchment of management because they can involve in less productive activities. Fama and Jensen (1983) stated, “Increased ownership share may adversely affect performance because it raises the firm’s cost of capital due to decreased market liquidity or decreased diversification opportunities”. But the results regarding this hypothesis vary across the different sectors like in pharmaceutical sector there is a positive relationship.

Moreover, the 4th hypothesis is also accepted in a way that in medium leverage firms increase ownership by institutions would result in efficient monitoring and association of insider interests to their objectives so their ownership deliberation would be anticipated to have a positive outcome on firm performance. These results are consistent with the findings of Jensen & Meckling, 1976, Shleifer & Vishny, 1986, Friend and Lang 1988, Huson Joher and Mohd. Ali 2006, Jiraporn & Gleason, 2007). Cornett et al. (2004) stated that “relation of institutional ownership and corporate performance confirm a significant positive relationship between firm’s operating cash flow and institutional ownership”. Because institutional investors can actively participate in the corporate control and decision-making processes of the organization.
CONCLUSION AND RECOMMENDATIONS

Results of our regression analysis indicate that there is significant and negative relationship between the performance of the firm and management ownership in Pakistani manufacturing industries because of the entrenchment effect and extra tight control of these ownership types. Institutional ownership shows significant and positive relationship with performance of the firm due to the efficient monitoring and control of the firm. While borrowing decision of the organizations are effected by their ownership structure in a way that when management concentration becomes large then they try to take less debt in order to avoid the default risk of the firm due to the large borrowings of the organizations and the borrowing cost as well. While institutional shareholders does not allow borrowing from externals sources because they do not want to lose their control.

In addition to ownership structure performance and capital structure of the firm is also influenced by some other factors like size of the firm, age of the firm etc. as the firms become larger then they their sales become larger that ultimately results increase in performance of those organizations. When their performance increases then based on packing order theory, they tend to rely on their earnings rather than relying on debt. Similarly as the firms become older they become more stable and adopt better competitive strategies to compete so their performance increases and at the same time they also tend to rely on their earnings instead of relying on debt so we can say that size and age of the firm have positive relationship with performance of the organizations while they are negatively related to the borrowing of the organizations due to their internal dependence in meeting their financial needs. In addition to these a number of factors can be there that can influence the performance as well as capital structure choices of the firms that are not being included in this research. Growth and tax shield of the firm has also shown some significant relationship in many different ways that influences the performance as well as the borrowing decisions of the organizations.

Based on the research we can say that as the concentration of insider ownership increases then performance of the firm decreases and borrowing of the firm also decreases. These finding help the organizations to design their ownership structure in a way that does not decrease their performance and not result in agency problem. While at the same time organizations should also decide an optimal level of institutional ownership that can help them to effectively monitor the performance while at the same time could not impose additional restrictions in the policies of the organizations.

It is recommended for further researchers that I have taken only the manufacturing organizations of the Pakistani listed companies at Karachi Stock Exchange. Services sectors, financial sectors can also be taken in studies to determine that whether the same behavior is found in services and financial
sector or not so that an overall model for the better ownership structure can be proposed for all the
companies of Pakistan that can help them to maximize the wealth of their organizations.
Time horizon of the data should be enhanced so that changing trend in ownership structure with the
passage of time can be observed and their influence on performance as well as on capital structure
of the firm can be observed so that a model of right ownership structure can be proposed for the
organization that can help to improve the performance.
In order to decide the optimal capital structure and to indicate the performance of the firm
additional measures should be taken in account that influences the performance and capital
structure of the firm.

LIMITATIONS OF THE RESEARCH
There are a number of limitations of this research which include;

• Availability of the data
• Time horizon of this research is limited to 10 years.
• Only three sectors are included in this study
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