

Determining Agency Theory Framework through Financial Leverage & Insider Ownership

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Abstract

Sound practices of corporate governance help firms to lift their performance and bring in investors' confidence while enabling shareholders' rights protection, qualifying the legal requirements and spotlight the vast public image about how they are operating their business. Most of the previous literature on agency theory in Pakistan has demonstrated connection among ownership structure on firm performance, value and profitability. This study extends the literature by proposing the effect of change in leverage & insider equity ownership on agency cost mitigation. Proxy is used to measure agency cost: Expense ratio: Operating expense / annual sales. We applied "Fixed effect" method on sample of 41 non-financial firms from four economic groups listed in Pakistan Stock Exchange from the period of 2010-2014. The practical implications of the study is that those investors who desire long term performance of the firm may perhaps invested in those firms which are owned by insiders or containing acceptable amount of debt, for the reason that such firms try to maintain & continue long term performance by agency cost minimization & shareholders' interests protections.

Keywords: agency cost, block-holders, insider equity ownership, entrenchment effect

1. Introduction

Corporate governance literature presumes the serious stress among corporate managers and shareholders (Jensen & Meckling, 1976; Berle & Means, 1932). For the corporate controls in agency theory, even well-developed and mature markets seems to be nonexistent. So, leading to misstep and failures of markets, asymmetric information, adverse selection, moral hazard and incomplete contracts (Ale & Allen, 2001). Mechanisms designated to hedge shareholders' interests are labeled as corporate governance mechanism (Jensen & Meckling, 1976; Allen & Gale, 2001). Higher agency cost problems will be faced by companies' when they exhibit weaker corporate governance structure, consequently managers catering in personal interests than firm value maximization (Core et al., 1999). In the time, shareholders' objective is their investment returns, managers likely to have diverse ambitions, like esteem and prestige to run powerful and large organization, perquisites and diversion of their position.

Indeed, Berle and Means (1932) traced the prospects of owners and managers interests' conflicts outlined by their classical theory of "ownership's separation from control." The influential efforts of Jensen and Meckling (1976), has given steam on the literature of corporate ownership focusing on ownership separation control which spotlight the swell to principals and agents conflicts. For this agency problem, a number of solutions had been offered by the researches between shareholders and managers likely fall under the tier of incentive alignment, discipline, monitoring and other diverse ambitions.

First, through the practices of Market based compensation or stock options, shareholders and the manager's incentives can be aligned. Since, conflicts' nature between owners and managers and its economic consequences exhibited in the classical theory using the corporate governance structure of Anglo Saxon (Barle & Means, 1932). A firm's owners and its management and ownership widely diluted among shareholders, so that monitoring management carefully do not have a strong incentive, company's shares do not held by the managers in larger fractions resulting in mismatching financial interests. Whereas, larger chunk of shares held by managers as they identified common interest with owners. Besides, insiders' interests corresponding the dissimilarities among

insiders and outsiders when fraction of insider ownership is extremely high (Suk & Han, 1998). High equity stake of insiders leading them more powerful and significant voting rights accelerating their freedom of personal goals fulfillment.

Agency conflicts arises due to two diverse forces that derive the response from the corporate managers (Merck et al., 1988). Managers naturally concentrate on to allocate the resources of the organization to increase their own power, wealth and perquisites. This force create the misalignment of interest with external shareholders. Whereas, the insider ownership as a second force to solve such agency conflicts. Other flipside argues that managers become entrenched just after there is steep managerial ownership thereby agency problem exacerbated (Fama & Jensen, 1983; Demsetz, 1983). However, two types of behavior could be adopted by the firm's insiders, i.e. alignment effect; market value of firm increase as holding of insider's ownership increases, or entrenchment effect; likely to pursue managers' own goals as insider's ownership stake increases (Jensen & Meckling, 1976; Fama & Jensen, 1983).

Second, third party (Leverage or Debt holders) can reduce equity agency costs via management monitoring participation and providing more systematical decisions making. Leverage policy seized to slice agency cost born before now by stockholders or managerial owners to debt holders, so, there is decline in equity agency cost. This fixates stress on managers to provide the real report of business to the investors of such financial institutions and to run the business profitability. This control and monitoring also reduces the agency cost of owner and manager. However, ownership dilution theory which is supported that managers of firms carrying the higher insider ownership struggle to bypass diluting their power and control by adding debt (Sorensen & Kim, 1986). Leverage and managerial ownership in a firm aids to fix or align manager and owner interest and therefore sustain agency problems (Jensen & Meckling, 1976). If both serves as substitute tools geared at reducing agency costs, higher the level of insider ownership or leverage expected results the lower the agency cost and vice versa.

1.1 Pakistan's Code of Corporate Governance

SECP (Securities and Exchange Commission of Pakistan) in year 2002 published the code of corporate governance for the aspiration of transparency, enhancing governance structure and companies financial reporting disclosure improvement in order to cushion and hedge the corporate investors' interests. Corporate governance practices in Pakistan as developing economy probably to be different from matured economies. Preceding corporate governance literature also contest that extensive work have been done in this field in developed economies than very little in growing economies, by the reason of their corporate governance mechanism is still diversifying and evolving (Yatim et al., 2006; Carcello, 2002).

A very limited exploration have been done in Pakistan in the field of ownership structure and the role of corporate governance mechanism to minimizing agency problems and costs. (Ghani et al., 2002) delve into business groups and only investigate their corporate governance impact from 1998 to 2002. (Hassan & Butt, 2009) check out the corporate governance and ownership structure on capital structure since 2002 to 2005. (Cheema et al., 2003) found only the corporations' ownership structure nature in Pakistan. (Ashraf & Ghani, 2005) examine the growth, evolution and disclosure of accounting principles. (Butt & Tariq, 2008; Iqbal & Javed, 2006; Khatab et al., 2010; Nishat & Mir, 2004) investigate the impact of corporate governance on firm's performance. (Shahab & Attiya, 2011) evaluated managerial ownership impacts on the financial policies of firms. Their study mainly evaluate the impact of managerial ownership's concentration on financial policies of firm. Hence, in limiting it, in Pakistan it is the first work compassed which address the corporate governance's role, agency problem, financial leverage and ownership structure simultaneously.

Moreover, studies in mature economies are few in number which have directly and categorically measured insider ownership and financial leverage determinants along with the factors effecting agency costs of firm. Researches which have empirically investigate the influence on agency costs by corporate governance mechanism includes, (Ang et al., 2000) who have taken US non-listed companies data (Fleming et al., 2005; Darren Henry, 2006) taken the frame of listed companies of Australia, (Singh & Davidson, 2003) taken the sample of US large listed firms, (Florackis & Ozkan, 2004) at United Kingdom from 1999 to 2003.

1.2 Research Questions

Established on the problem statement, research questions are;

- a. Does agency cost minimization worked by insider ownership?
- b. Does agency cost minimization worked by leverage?

- c. Does there any divergence between the agency costs of corporations where insider's stockholdings are deeper or steeper?
- d. If the agency cost effected by financial leverage and insider ownership, consequently in which (positive or negative) direction and what is its degree or magnitude.

1.3 Hypothesis Building

'Theory of the Firm', Jensen and Meckling (1976) proposes higher managerial ownership mitigates agency costs. Whereas, larger chunk of shares held by managers as they identified common interest with owners (Berle & Means, 1932). Whereas, Suk and Han (1998) contradicting the insider ownership as managers' and shareholders interest alignment, equity stake of insiders leading them entrenched, more powerful and significant voting rights accelerating their freedom of personal goals fulfillment. However, unlike the Han and Suk study, we are applying the theory of diversification effect for insiders', at high level of insider ownership with a major stake in a firm where insiders' are less diversified and only incentive for the insiders' to increase shares holder wealth and it became the primary objective of insiders as well. Hence, our first hypothesis is,

H1: Agency cost will be lower at higher level of insider ownership.

Consequently, insider equity ownership and leverage can be considered as substitute appliance or mechanism geared at reducing the effect of agency cost. Threat of bankruptcy may provide motivation for the improvement of management (Grossman & Hart, 1982). Debt allow the investors (banks, bond holders or financial institutions) to regulate managers so that they collect information which is useful for oversee management (Raviv and Haris, 1990).

H2: Agency cost will be lower at higher level of financial leverage.

2. Literature Review

For the determination of agency cost, financial policies and ownership structures there is large amount of empirical literature is available in previous studies, that links the relationship between them. Insider equity ownership had important emanation on the financial leverage, operating risk, corporate control and agency cost and there is incompatible testimony is available on the relationship between them.

Agency theory initially developed by Berle and Means (1932) in "The Modern Corporation & Private Property", which concerns the control & separation of ownership in a large firm. This circumstantial provides the floor for managers to create agency conflicts and to strive their own interest rather than shareholders' value maximization. He traced the prospects of owners and managers interests' conflicts outlined by their classical theory of "ownership's separation from control."

Instead of firm's value maximization managers have motive for their own utility maximization or also used the resources of firms for their own particular benefits, that's why agency cost increases because of separation of control and ownership. In their study, they describe agency cost in two types: agency cost arises in the conflict between manager and shareholders and agency cost which occurs between shareholder and debts holder conflict. Agency cost includes residual loss, bonding expenditure and monitoring expenditure is included in the study "Theory of the Firms" (Jensen & Meckling, 1976).

(Marris, 1964; Baumol, 1990) designate the relation between insider equity ownership and corporate value by dividing two groups of stockholders. First, inside group who are firm's managers and having voting rights. Second class standing outside shareholders who do not having voting rights. Dividend per share is same for both classes of shareholders. Despite this, shareholders who are insider, able to expand the cash flows' current stream through additional non-marketable perquisites' consumption. According to this framework, manager have incentive to design financing and investment policies that is beneficial for him, but cut the payoff to shareholders who are outsiders and having non-voting rights. Hence, firm's value is dependent on number of shares held by insiders. Greater shares held by insiders will translate the more firm value.

In the study of Gross man and Hart they describe with assumption that the menace of bankruptcy may provide motivation for the improvement of management, so management has to control financial structure. They discussed there is absence of bankruptcy threat in equity financed firm, there is no encouragement for the maximization of profit in particular and noticeable in the market that instead of wasting organizational resources they will pay particular attention to profits. If the results of bankruptcy is in loss of benefits that the managers enjoy the bankruptcy threat will bring more stress on managers (Grossman & Hart, 1982)

According to Jensen (1986), suggestions by condensing free cash flow amount that how debt avocation helps in fining managers. He discussed the word free cash flow at the time that "cash flow in excess which have NPV

positive when they discounted at applicable cost of capital which is needed for the funding of all the projects” He defines that it may be possible that the managers may invest over and above the level which is set as an optimal level and for the purpose of expansion. The result of overinvesting in business is that manager raises resources which are under their control for self-aggrandizement. At the time when firm expands in size, managers’ gain more power, consequently greater opportunities to enjoy excessive perks and perquisites. When managers have enormous cash flow, they have choice for either clutch or retain in business for the purpose of investment in that projects which provide low returns or distribute cash as dividend. This is the scenario which causes conflicts of interest between shareholders and managers. The Jensen suggests that this situation can be handling by either issuance of debt or give them firms ownership by stock options. This provides authority to debt holder that if managers fail to fulfill their promise to take the firm in court for the bankruptcy. This situation avert managers to stop wasting it or from investment in the projects which gives low-return. (Jensen, 1986).

3. Model

Testing the hypothesis of panel data estimation approach takes account of hetroskedasticity (individuality) and endogeniety in the data. For the panel data estimation; (PRM) Panel Regression Model, (REM) Random Effect Model and (FEM) Fixed Effect Model are three key accessions. We applied “Hausman Test” to check which model (Random Effect or Fixed Effect) is suitable to accept. This test report the null hypothesis “Coefficients are not different systematically or Random effect Model is appropriate”. By applying the test, this hypothesis does not hold.

The systematical structural forms of equations to be estimated in the study follows.

$$AGNC_{it} = \alpha_0 + \alpha_1 INSI_{it} + \alpha_2 LEVJ_{it} + \alpha_3 RMS_{it} + \alpha_4 INSTO_{it} + \delta_i + e_{it} \quad (1)$$

Where:

$AGNC_{it}$ = the dependent variable of the model, for firm i at t period.

α = the intercept

δ_i = the firm-specific fixed effect

e_{it} = error term

Abbreviation of Variables are as: Agency Cost (AGNC), Insider Equity Ownership (INSI), Financial Leverage (LEVJ), Block-Holders’ Ownership (INSTO), Directors’ Remuneration (RMS).

Note: Since, many other aspects which could affect the agency cost. Therefore, we have included the two control variable in our study in the agency cost model, i.e. Block-holder ownership and Director’s remuneration.

3.1 Data Sources and Sample Size

To execute econometric projection or estimation, data acquired from State Bank of Pakistan Statistics and Data Warehouse Department, data portal of SECP for the comprehensive audited reports of individuals and from the official websites of incorporated firms covering the period of 2010 to 2014. Thus, the study constitute on secondary data. The sample of 41 non-financial firm’s basis incorporated following the sectors of Cement, Food & personal goods, Automobile assembler, Automobile parts & accessories and Chemicals, Chemical Products & Pharmaceuticals listed in PSE index for the period (2010) to (2014). Purpose of nominated tier to make the data availability on the concerning variables. The reason of financial firms’ exclusion (Insurance, Banking, Modarabas & Leasing etc.) from sample is that, this sector is highly regulated and are many restrictions and unique characteristics on its capital structure. Additionally, analysis of 41 non-financial companies clinching the five year financial data from 2010 to 2014, which led to 205 observations.

3.2 Definitions and Measurement of Variables

Thus, many other aspects which could affect the agency cost. Therefore, we have included the two control variables in our study in the agency cost model which is block holders’ ownership and directors’ remuneration structure.

LEVJ (Leverage): Leverage (Explanatory Variable): Leverage grabbed by figuring out the debt ratio, which is “total liabilities” divided by “total assets”.

INSI (Insider managerial ownership): Insiders are firm’s directors, managers, officers, relatives, association who have right to appoint the director with specific fraction of ownership to participate in the firm’s management. Insider ownership be dug through the ratio of “Shares held by Insiders” to “total number shares issued”, as a

stand in or proxy for insider ownership.

AGNC (Agency cost): To dig agency costs (Dependent Variable), we applied the alternative efficiency ratio mechanism could be enacted which periodically taken place in the accounting and financial economics, (James S 2000; Rabel A & Ang 2000; Cole, Wuh Lin, Davidson & Singh 2003). Expense ratio: Operating expense / annual sales

RMS (Directors Remuneration structure): Prediction is made on prior literature investigation, lower the agency cost by increased directors' remuneration or incentives which pressure the managers to work and align their interest with stockholders of the firm. In contrast, (Darren Henry, 2006) documented the remuneration structure mechanism as negative influence on agency cost, which projecting agency cost does not mitigating by steeper remuneration structure. Monitoring through an engaged and freewheeling boards of directors notify that managers enact in the shareholders best interest (Fama and Jensen, 1983).

INSTO (Institutional Ownership or Block-Holder): 'Active Monitoring Hypothesis' pose that managerial opportunism's scope reduced by external block-holders resulting in mitigating management and shareholders direct agency conflicts (Vishny & Shleifer, 1986). Mitigating agency problem, decisive role played by institutional stockholders, who can influence decisions to be made by managers exposed by (Brickley, 1988; Lease & Smith, 2004; Henry, 1988). In divergence, institutional ownership do not geared to reduce agency cost (Doukas et al., 2000; Mcknight & Weir, 2008). Following Darren Henry (2006) Institutional ownership determined as slicing the total percentage stockholdings of all institutional stockholders.

4. Statistical Results and Analysis

4.1 Descriptive Statistics

Descriptive statistics on view in table 1 addressing the mean, maximum, minimum median values with standard deviation of eight variables for the period of 2010-2014. Sample of 41 firms have been taken listed in Pakistan Stock Exchange.

Table 1. Summary of descriptive statistics

Variables	Mean	Median	Maximum	Minimum	Std. Dev.	Obs.
AGNC	0.107512	0.080000	0.720000	0.000000	0.099154	205
INSI	0.595902	0.650000	0.950000	0.120000	0.186295	205
LEVJ	0.475707	0.470000	0.940000	0.010000	0.219125	205
INSTO	0.134683	0.100000	0.770000	0.000000	0.141811	205
RMS	17.20863	17.36000	21.13000	0.000000	2.032929	205

Table shows mean AGNC is 0.10 and median 0.08. AGNC ranges from minimum value 0 to maximum value 0.7200 with standard deviation of 0.0991 for the overall sample. As for as INSI concerned, INSI mean ratio 59.59% and it's minimum and maximum 12% and 95% respectively, with the standard deviation of 18.62%. Notably, managers of sampled firms of PSE market on average own the .5959 (59.59%) which means this is quite higher than the U.S market's managerial ownership level reported in the study of Jensen et al (1992) and Dutta (1999). Maximum value of LEVJ is 0.9400 limiting the downside up to 0.01. The mean value of LEVJ 0.47 with standard deviation of 0.21. The average value of INSTO is 13.46% which supported by standard deviation of 14.18%. Lower boundary of INSTO is zero which stretch up to 77%. Since, sampled firms on average 17.20 RMS. The standard deviation of RMS is 2.03, maximum value is limited up to 21.13.

4.2 Correlation Matrix

Table 2 presents the correlation matrix of all variables based on 41 firms' data for 2010-2014. In order to detect multicollinearity problem either exist or not among the regressors, the mechanism of Product-moment of Pearson correlation coefficient widely used (Kennedy, 1998).

Table 2. Correlation matrix

	AGNC	INSI	LEVJ	INSTO	RMS
AGNC	1.0000				
INSI	-0.0529	1.0000			
LEVJ	-0.2523	-0.0648	1.0000		
INSTO	-0.0551	-0.4655	-0.1384	1.0000	
RMS	-0.1043	0.0577	-0.0526	0.0810	1.0000

Multicollinearity exists when there is high correlation among the variables (Anderson et al., 2007; Saunders et al., 2003). Thus, through the use of correlation matrix technique, multicollinearity can be detected. Problem of multicollinearity will be existed among explanatory variables when a paramount correlation is composed among them. However, researches are diverged at specific benchmark correlation considered to be high. A correlation when exceed 0.80 will be consecrated high (Kennedy, 1998). Multicollinearity problem will exist when correlation among any two variables reached up to 0.80 (Cramer & Brayman, 2001). Whereas, Anderson proposed the 0.70 benchmark of high correlation (Anderson et al., 1999).

Whole sampled data being used to detect correlations between regressors using Pearson's r which is on view in table 2. Hence, it can be seen in the table that there is no severe correlation among any two of the explanatory variables, which marks multicollinearity in the study do not appear to pose a severe problem. Noteworthy, none of coefficients of correlation of all variables go beyond -0.46 or +0.32. Further analysis is drained to detect the type of association between variables.

After Pearson's r further analysis, we found several outcomes which are significance and noteworthy. It can be seen, agency cost is negatively associated with firms' leverage, insider equity ownership, institutional ownership and remuneration structure, which symbolizes the agency cost mitigation and shareholders' interest alignments.

4.3 Regression Analysis Based on Fixed Effect Model

Regression results are reported in Table 3 by using the FEM, where AGNC is response variable. The regression outcomes between INSI, LEVJ, RMS and INSTO to AGNC is on view.

Table 3. Fixed effect regression results based on fixed effect model

Explanatory Variables	Dependent variable	
	AGNC	Std. Error
Constant	0.403332	0.09803
INSI	-0.18032**	0.087362
LEVJ	-0.29398*	0.04738
INSTO	-0.26884*	0.097971
RMS	-0.00072	0.00399
R-squared	0.64928	
Adjusted R-square	0.55659	
F-statistics	6.75124*	
Hausman's Test chi prob.	0.0331**	
Observations	205	

Note. *. Significant at the 1% level. **. Significant at the 5% level. ***. Significant at the 10% level.

INSI displayed the negative relation with AGNC is significant at 5% which is consistent with ours hypothesis of agency cost mitigation through insider equity ownership and proofing the theory of Jensen Meckling. Whereas, contradicting with the finds of Singh and Davidson (2003) who found the negative relation between managerial ownership and assets utilization ratio. In addition, Morck et al. (1988) reported that as insider ownership increased to high level from moderate level could lead entrenchment phenomena. Increasing amount of compensation is required by managers as they become entrenched resulted in agency cost. Notably, our study contradicting the entrenchment theory of (Morck et al., 1988; Suk & Han, 1998; Fame & Jensen, 1983; Demsetz, 1983) which is managers perform well in moderate ownership but agency cost will be high in higher ownership tier. Thus, at high level of insider ownership with a dominant stake in a firm where managers are less diversified and only incentive for the managers to increase shares holder wealth.

Furthermore, the regression outcomes reporting the highly significant negative relation between sampled firms' agency cost and leverage which is supported by numerous theories and consistent with the hypothesis. First, adding debt increased the monitoring of management, i.e. banks, and to put pressure to run firms profitable (Ang et al., 2000). Second, debt crate the risk of bankruptcy risk and threaten the managers' job lost which considerably helps to align the managers and shareholders business interests (Williams, 1987; Gorossman & Hart, 1958). This outcome is also consistent with the study of (Cui & Li, 2003; Fleming et al., 2010; Hua et al., 2010).

Since, many other aspects which could affect the agency cost. Therefore, we have included the two control variables in our study in the agency cost model. Hence, the results shows the fact that INSTO have negative relation with agency cost with the 1% level of significance. Similarly, Vishny & Shleifer (1986) investigate that shareholders and managers interests could be aligned by large shareholders or block-holders as they have

incentive to discipline and monitors the actions of managers. Finally the RMS has insignificant relation with agency cost. Prior literature predicted higher directors' remunerations could reduce the agency cost because remuneration as directors' incentive will make sure the managers to act on in the best interests of the shareholders and company. However, Darren Henry (2006) reported in their research that remuneration is worked as agency problems reduction.

5. Summary and Conclusion

In this study, we spotlighted the fundamental tension on corporate governance and assess the mechanisms in controlling or minimizing costs which strikes over from agency problems. We developed the simultaneously devices steered at minimizing the agency through insider ownership and leverage. We tested the effect of change in insider equity leverage on agency cost mitigation. We applied "Fixed Effect Model" method on sample of 41 non-financial firms listed in Pakistan Stock Exchange from the period of 2010-2014.

This study answered the questions that insider equity ownership and leverage can be considered as appliance and mechanism geared at reducing the effect of agency cost and Stock-holders' interests' are protected in the firms with increased insider ownership and financial leverage. Moreover, this study would also expected to provide some fruitful and innovative guidelines for the effective mechanism of corporate governance to hedge stockholders interests, instills their confidence and to look into the long term value creation of Pakistani firms and across world. The practical implications of the study is that those investors who desire long term performance of the firm may perhaps invested in those firms which are owned by insiders or containing acceptable amount of debt, for the reason that such firms try to align with shareholders' interest and to maintain & continue long term performance.

Besides, the study may have some limitations as well. Along with the potential benefits of debt, other severe consequences likely created by debt is bankruptcy threat is not incorporated in this study. We were unable to oversight other factors such as board size and dividend policy which could influence the agency cost due to data availability constraints and time limitations.

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Appendix A

Fraction	Frequency of Insider Shareholdings									
	2010		2011		2012		2013		2014	
	N	%	N	%	N	%	N	%	N	%
0%-5%	0	0	0	0	0	0	0	0	1	0.02
6%-25%	4	0.1	3	0.07	3	0.07	4	0.1	2	0.04
Above 25%	37	0.91	38	0.93	38	0.9	37	0.9	38	0.93

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