Testing agency and stewardship theories in the environment of Pakistan (Evidences from oil and gas development and electricity sectors of Pakistan)

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Abstract
The main purpose of the research is to examine empirically that which one theory is best to apply in Pakistani environment. Agency and Stewardship theory is empirically examined for this purpose. Agency theory says that the performance of the company is maximized by the separation of roles of board chair and CEO. Stewardship theory says that the performance of the firm is maximized by duality of the roles of CEO and board chair. Results of an empirical test which is applied on two sectors oil and gas sector and Electricity sector of Pakistan. the sample is collected from KSE listed companies of both sectors and the data is collected from 2009-2012. The results of descriptive statistics, correlation and regression analysis shows that the CEO duality and BOD has a positive relationship with firm performance but the non-executive directors have a negative impact with firm performance the results fail to provide support to agency theory and provide some support to stewardship theory.

Key words: Agency theory, stewardship theory, CEO duality, board chair,

1.0 Introduction:
1.1 Agency theory:
An agency theory is the association or a direct relationship between two persons in which the one is called the principal and the second person is called the agent who represents his principal in all day to day or related transactions with the third party. this relationship occurs when the principal hires the agent to perform all tasks and services which the principal assigns to him. Principal commonly gives all the decision-making powers to the agent so that the gent can perform on the principal’s behalf. when the thinking and the decisions making of the agent and the principal don’t matches then the agency problems arises. Or the agency problems also can arise due to inefficiency of the agent of the incomplete information given by the agent to the principal or wrong work done by the agent. In finance terms there are two agency relationships exists those are between shareholders and management of the company and between shareholders and creditors. Agency theory is concerned with resolving the problems between the agents and the principals that are exists in agency relationships. Principals (that can be shareholders) and agents of the principals (for example, company management). The two problems that can exist are

1.1.1 Problems which exist in Agency relationship :

a.) The problems arise when the expectations of the principal which he expects from his agent are not fulfilled and the principal is not satisfied with the work of agent and he can’t verify the efficiency of the agent’s work because it is time consuming or maybe expensive to check that what is the agent actually doing

b.) The second problem arises when the principal and the agent have different perspectives about different matters such as risk and other factors. Because different people have different risk acceptances, the agent and principal have different thinking to take remedial and corrective actions regarding any problem so the problem can arise at this stage.
The Agency theory says that the managers in their market with labour and capital intensive they always earns profit for their own interest at the expense of the shareholders the duality concept interrupts the management and the profits of the firm. The managers of the corporation always works for their own self-interest and to maximize their own profits with the use of that information which they have about the company and the shareholders don’t have that information and the managers take advantages from this unawareness of the shareholders. In the common sense the agency problems in the public firms are more than the small or sole proprietor firms because the managers owns only a little or few share in the stock of the firm and the managers are less likely to work for the benefits of the shareholders rather to reduce all these problems ethically the shareholders have to suffer a cost which is called agency cost.

Agency cost is that cost which can be beard by the stockholders for solving the agency issues of agency conflicts that can be incentives, bonuses, decentralized decisions and offering shares. These are some of the measures or costs which can reduce of decrease the agency problems.

1.2 Stewardship theory:

Stewardship theory tells that managers to work dually will indeed act as responsible stewards of the assets of the firms that they control and used. This stewardship theory is an alternative of agency theory in which it is assumed that the managers act in their own self-interests for the firm at the expense of stockholders. It specifies many methods which reduces agency cost including the executive salary compensation, there are many levels of benefits and also there are very executives incentive programs by giving them financial benefits or also offering shares and other luxurious items as reward and other benefits that can bring financial interest of executives to motivate and encourage them for better performance and for the benefit of better firms performance and for the shareholders’ interests.

If a firm adopts a stewardship method of governing its operations, certain policies and regulations followed. Company’s articles will specified in detail the roles and the responsibilities and also the expectations of the managers. The manager’s expectations will be highly goal-oriented and designed in such a way to persuade the manager's ability and sense of doing something for betterment of the firm and worth of shareholders. Stewardship theory very briefly guides to executives and managers who are free to follow their own ambitions and goals. It naturally depicts from this view that the executives of the firm are naturally "company men" who will work very hardly for the firm’s interests and for the shareholders wealth rather than their own interests and their own benefits. Freedom of decisions will be used for the benefit and for better performance of the firm.

1.3 Problem statement:

Both the Agency and Stewardship theory argued to be applied on industry of listed companies on KSE to get a high level of performance of the firm but now in Pakistan it is a problem that which theory is to be applied on the industry for better performance of the firm? The analysts are confused that agency or stewardship theory which they can apply in the industries of the Pakistan? Which theory can increase the performance of the firm?

1.4 Objectives of the study

The objectives of my study are

- Select the best one theory from the stewardship and agency theory that can be applied and beneficial for Pakistani environment.
- To check the Association of non-executive directors with performance.
- To find the solution of Mitigating the agency cost.
- To check the relationship of CEO duality and performance of the firm.
- To test the impact of Board size on the performance.

2.0 Literature Review:

Sridharan and Uma (1997) conducted the study of CEO duality and its impact on paper and forestry industry. The author used regression analysis to check whether the CEO duality matters or
not? the dependent variables market value of the firm and independent variables CEO duality are positively associated with each other. The results of the study shows that in paper firms the CEO duality supports to firms performance

Nicolson (2007) have studied the impact of board of the directors on company’s performance by using many mathematical models to check either directors impacts performance or not? Analysis shows that the independent variable which is directors significantly impacts the dependent variable which is the performance of the firm. The study emphasizes on stewardship theory as compare to agency theory.

Braun (2007) conducted the study that whether the CEO can also be chair of the board members or not? Examination of Family owned Public Firms. He used the moderated regression model to evaluate the impact of the CEO on family controlled public firms. Independent variables Duality Ownership Duality*ownership have positive and significant impact on dependent variables Firm Performance. Results of this study show that the duality of ownership does not impact firm’s performance.

Bathula (2008) worked and researched for knowing that the characteristics of the board of the directors impacts the performance of the firm in any way or not? He used descriptive statistics for the statistical data to get findings about the topic and after examining he come to know that the independent variable board characteristics positively impacts on dependent variable that is organizational performance the conclusion of this study is that all the board characteristics have a positive impact on the firm’s performance especially the large size of the board adds to value to the firm performance.

Jo and Harjoto (2009) conducted a study to check power of the CEO in the context of the performance of the firm he used descriptive statistics to check the relationship or effects of the CEO plurality he used form performance as dependent variable and CEO plurality as independent variable. He argued that CEO plurality positively as well as negatively impacts on firm’s performance in different time frames this phrase can be understood by the conclusion of end results The end results shows that the stewardship or CEO plurality is beneficial only in early stage and but after some time or in mature stage the agency theory dominates the stewardship theory and stresses to separate the

Wesley (2010) investigated the study of stewardship theory and its impact on the performance of the firm and family ownership and internal perspective of corporate governance. The author used generalized least square regression to examine the results the relationship between the dependent variables firms’ performance and independent variables CEO stewardship are positively correlated to each other. The findings of the whole study are much related to the previous study that stewardship leads to better firm performance.

Lin (2011) examined the study for the topic of the CEO duality and its impact on firm’s performance and the board involvement in the operations. He drew the results by applying regression analysis on the selected data to evaluate the duality according to firm’s performance. The dependent variables are the EPS and the independent variables are CEO duality. There is a negative relationship between the variables. The whole study concluded that the CEO duality negatively affects the firm’s performance and this study supports to agency theory.

Korniadi (2012) conducted the research for the topic of the role and impacts of independent directors on firms performance. He used Tobin’s Q model and ROA, ROE for analysing that the board impacts firms performance or not? After this methodology he come to know that the independent variable that is independent directors negatively impacts the dependent variables that is firms performance it only impacts positively when the independent directors are in minority. The results of the study shows that according to newzeland environment the stewardship theory supports to firms performance as compare to agency theory.

Harvath and Villorathi (2012) conducted the research of the board of directors and its impact of firm’s performance with the condition of greater insider ownership. They used descriptive statistics and regression analysis for analysing that either the directors have any impact on firms performance or not? The empirical results of the study shows that dependent variable firms performance is positively
influenced by the independent variable insider ownership. The conclusion of the study is that with the help of greater insider ownership many agency problems can be reduced and the stewards can add to the value of the firm.

2.0 Theoretical Framework:

Independent variables

- Non-executive
- Board Members
- CEO Duality

Control Variables

- Firm Size
- Leverage Ratio

Dependent Variable

Tobin’s Q

3.1 Hypothesis Development:

H1: CEO duality has an association with the performance of the firm
H2: Greater the number of board members higher the performance of the firm
H3: Non-executive directors lead to high performance of the firm

This present study will check these three hypotheses to provide the results regarding the validity and the reliability with the competition of two theories. It should be taken under consideration that the focus of the present study is the role issue of the CEO, BOD and the Non-executive directors regarding the performance of the firm.

4.0 Methodology:

The sample of the study is collected from the Karachi stock exchange. Sample data is collected from the two sectors oil and gas development sector and electricity sector of Pakistan. Data is collected from all the companies of oil and gas sector and electricity sector to collect and test the data on very accurate and reliable basis all the firms that are not reliable or not providing the accurate data which is not reliable for the study are excluded from the sample data. The sample data is collected from 2009-2012 to check the very recent results of the data.

4.1 Sample Selection:

The sample of the study is the group of 15 firms from oil and gas development and electricity sector of Pakistan. 10 companies are taken from oil and gas development and 5 companies are taken from electricity sector to check the best implication of two theories agency and stewardship theory in Pakistani environment.

4.2 Data sources:

In this segment the data the data is collected from all the required sources which are the stock exchange and the respective company’s websites from where the annual reports and other data is collected almost 70 annual reports and other data is collected from KSE and related websites of the firms of the respective sectors. All the data is collected from 2009-2012 from the above mentioned websites.

4.3 Variables Definition:

There are three types of the variables that are used in this study the dependent variable, independent variable and the control variables to extract the correct and valid results.

4.3.0 Dependent variable:

In this study the firms performance is selected as the dependent variable the performance of the firm is directly linked with the independent variables such as the CEO duality according to Pakistani environment the performance of the firm depends on the CEO and directors of the firm the
performance of the firm is Calculated by the Tobin’s Q. This is the accurate measure of calculating the performance of the firm.

4.3.1 Tobin’s Q:

Tobin’s Q was introduced by the James Tobin and William Brainerd in 1968. They define the Tobin’s q as Use of the letter "the ratio between the market value and replacement value of the same physical asset" it is an accurate measure of calculating the performance of the firm.

\[
\text{Tobin's q} = \frac{\text{Market value of equity}}{\text{Total Assets}}
\]

The Tobin’s Q assesses the firm’s market values. The higher the Tobin’s Q value attracts the investors to invest more in the company to get higher returns.

4.4 Independent variables:

The independent variables directly impacts or directly affects the performance of the firm such as CEO duality is an independent variable and it directly impacts the dependent variables which is the performance of the firm..

4.4.1 CEO duality:

CEO duality serves as independent variable in this study and it means duality of roles and the responsibilities. The Chief executive officer when serves as the chairman of the board also. This position is called the CEO duality. The work of the chair of the board is to manage the managerial staff and also the hiring and firing of the CEO. So if the CEO and the chair of the board is the same person and if he don’t work properly on both the seats than the performance can be decreased. CEO duality can be checked by checking the director’s profile of company.

4.4.2 Board members:

The size of the board, age of the board and the board compensation impacts the performance of the firm from a recent survey it is checked that the young staff now days are more active to work well on managerial level the size of the board also matters a lot for the betterment of the performance of the organization. Minimum number of BOD’s is seven but many researchers found that more number of directors positively impacts the performance of the firm according to the code of corporate governance. The board members can change many times in whole life of the firm.to calculate the board member the company profile is the major source and it is available in the annual reports of the firm.

4.4.3 Non-executive directors:

The non-executive directors are not the active members of the board. They just collect the sitting fees in the board meeting and they can hold the shares of the company. There is only one difference between non-executive directors and independent directors and that is shareholding because the independent directors don’t hold the firm’s shares.

4.5 Control variables:

The control variables control the effect of the independent variables to accurately extract the results. In this paper here are two control variables calculated which are the size of the firm and the leverage ratio.

4.5.1 Size of firm:

The size of the firm is not calculated by the physical appearance of the organization but it is calculated by the total assets or by the sales. The market share of the firm, sales turnover and the number of employees are the major sources to calculate the size of the firm. Taking the log of the total assets and the log of the total sales determines the size of the firm.

4.5.2 Leverage Ratio:

Leverage means the finance or the debt taken by the firm from different corporations the leverage ratios are used to check the leverage or finance taken by the company and it can be calculated by dividing the total liabilities by the total assets of the firm to check that how much debt is on the firm against its total Assets.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobin Q</td>
<td>Market value of Equity / Total assets</td>
</tr>
<tr>
<td>CEO Duality</td>
<td>From the profile of the directors which is given in the annual reports if the same person is acting as the director and CEO also than value 0 and if not than value 1</td>
</tr>
</tbody>
</table>
### Board of Directors
Measured by total number of directors on board from the profile of the board of directors from annual report

### Non-Executive Directors
NED measured from the annual reports and the profile of the directors

### Leverage Ratio
Calculated by the Total liabilities / Total assets

### Size of firm
Measured by the log of total assets

#### 4.7 Data Analysis:

The data is tested by SPSS. Descriptive statistics, correlation and regression model are applied on the data to extract the results. The Regression model is used to check the relationship of CEO duality, board size, and non-executive directors with the performance of the firm.

#### 4.8 Model:

\[ \text{Tobin's Q} = \alpha + \beta_1(\text{CEOD}) + \beta_2(\text{BOD}) + \beta_3(\text{NED}) + \beta_4(\text{FS}) + \beta_5(\text{LR}) \]

Tobin's Q = performance of the firm

<table>
<thead>
<tr>
<th>Tobin’s Q</th>
<th>CEOD</th>
<th>BOD</th>
<th>NED</th>
<th>FS</th>
<th>LR</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEOD</td>
<td>.138</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOD</td>
<td>.001</td>
<td>.060</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NED</td>
<td>.054</td>
<td>.127</td>
<td>.879</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FS</td>
<td>.481</td>
<td>.305</td>
<td>.140</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LR</td>
<td>.353</td>
<td>.046</td>
<td>.099</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed).**

*Correlation is significant at the 0.05 level (2-tailed).*

#### 4.9 Empirical Results:

The tables of the calculations and the results are briefly explained under.

<table>
<thead>
<tr>
<th>Table NO:1</th>
<th>Descriptive Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Minimum</td>
</tr>
<tr>
<td>TBQ</td>
<td>60</td>
</tr>
<tr>
<td>CEOD</td>
<td>60</td>
</tr>
<tr>
<td>BOD</td>
<td>60</td>
</tr>
<tr>
<td>NED</td>
<td>60</td>
</tr>
<tr>
<td>FS</td>
<td>60</td>
</tr>
<tr>
<td>LR</td>
<td>60</td>
</tr>
</tbody>
</table>

In the above table all the descriptive values are shown such as the dependent variable Tobin’s q is more accurately calculated its minimum value is .02 and its maximum value is 2.71 and the mean is .634, the independent variable CEO duality has also very nearest values the maximum value is 1 and the minimum is 0 and the mean is .183, mean of the board of directors is 9.7833 maximum number of the board of directors are 16 and minimum numbers or the board of directors are 7 in all the electricity and oil and gas companies of Pakistan the table also shows the mean of non-executive directors 6.900 and the maximum number of the non-executive directors are 14 and minimum numbers are 4 and the space from the mean value which is standard deviation is 2.4, the control variables that are firm size (FS) and LR (leverage ratio) also shown in the above table with the minimum and maximum values along with the mean values.

<table>
<thead>
<tr>
<th>Table no:2</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBQ</td>
</tr>
<tr>
<td>TBQ</td>
</tr>
<tr>
<td>CEOD</td>
</tr>
<tr>
<td>BOD</td>
</tr>
<tr>
<td>NED</td>
</tr>
<tr>
<td>FS</td>
</tr>
<tr>
<td>LR</td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed).**

*Correlation is significant at the 0.05 level (2-tailed).*
Table number 2 indicates the relationship of the variables with each other through the Pearson correlation test. The results show that the Board of directors (BOD) is significantly positively correlated with non-executive directors (NED). And CEO duality (CEOD) is negatively significantly correlated with firm size (FS) which means CEO duality leads to lower firm size and the Tobin’s q which is dependent variable is positively and significantly correlated with firm size (FS) which means greater the size of the firm higher the performance of the firm. The rest of the variables are insignificant.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Std. Error</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>(constant)</td>
<td>-7.172</td>
<td>1.866</td>
<td>.000</td>
</tr>
<tr>
<td>CEOD</td>
<td>.233</td>
<td>.228</td>
<td>.091</td>
</tr>
<tr>
<td>BOD</td>
<td>.034</td>
<td>.075</td>
<td>.065</td>
</tr>
<tr>
<td>NED</td>
<td>-.012</td>
<td>.072</td>
<td>.862</td>
</tr>
<tr>
<td>FS</td>
<td>.803</td>
<td>.186</td>
<td>.000</td>
</tr>
<tr>
<td>LR</td>
<td>-.004</td>
<td>.001</td>
<td>.04</td>
</tr>
<tr>
<td>R square</td>
<td></td>
<td></td>
<td>.375</td>
</tr>
<tr>
<td>F statistic</td>
<td></td>
<td></td>
<td>6.4</td>
</tr>
</tbody>
</table>

4.10 Regression Findings:

The linear regression model is used for this analysis and the above shows the significance and insignificance level of all the variables with the dependent variable Tobins q. In the results of regression analysis the CEOD is has significant and positive impact on Tobin’s q and BOD is also significantly and positively impacts the Tobin’s q which means the greater the number of board of directors higher the performance of the firm and the NED has a insignificant and negative impact on the performance of the firm the 3rd hypothesis is rejected on the basis of this regression analysis.

Tobin’s Q = α₁ + β₁(CEOD) + β₂(BOD) + β₃(NED) + β₄(FS) + β₅(LR)

If CEO duality exist than positive change in Tobin’s q with Rs.233 and BOD size if increases than also it has a positive change in Tobin’s q with Rs.034. similarly if FS increases than the tobin’s q also increases with Rs.803 and if there is 1% increase in LR than tobin’s q will decrease by Rs.004

5.0 Conclusion and recommendations:

This study examined that which theory is best to apply in Pakistan for the purpose of higher level of performance of the firm. This study is applied on 10 oil and gas companies of Pakistan and 5 electricity companies of Pakistan and the time frame for this analysis is from 2009 to 2012 the major findings of this research are summarised below as: the CEO duality has a positive relationship with the performance of the firm and the number of the board of directors are positively correlated with firm performance the Non-executive directors are negatively correlated with the performance of the firm.

It was supposed that the agency theory affects positively to the performance of the firm and it should be applied In Pakistan for a higher level of firm performance but the empirical results which drawn on the sample data have neglected this statement and the results failed to support of agency theory and supports to stewardship theory. In conclusion the 3rd hypothesis is rejected that the non-executive director’s supports to higher firm performance but the results rejected this hypothesis by showing negative relationship of firm performance and non-executive directors. The results of this research supports to stewardship theory but as a researcher I recommend the agency theory in Pakistani environment because it has very positive effects on the performance of the firm according to the corporate governance. Still in Pakistan stewardship theory is working but it is analysed that with the implication of agency theory and separating the role of board chair from the CEO the Pakistani firms will definitely perform better.
5.1 Limitations:
- The study is limited to most of the public firms as compared to private firms.
- The sample size is small and specifically the results are drawn only from the two sectors out of 33 sectors in the stock exchange.
- The study is limited to oil and gas development and electricity firms of Pakistan.

6.0 References:
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