



# Impact of Organizational Life Cycle Stages on Quality of Corporate Governance: Empirical Evidence from Pakistan's Corporate Sector

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**Received:** 13 May 2020

**Accepted:** 08 July 2020

**DOI:** <https://doi.org/10.32479/ijefi.10279>

## ABSTRACT

The purpose of this research study is to determine the influence of the different organizational life cycle stages in modeling the quality of corporate governance. The study employs data of 46 companies listed with the KSE 100 index and uses a governance prediction model to determine the nexus between the organizational life cycle and the quality of corporate governance. The longitudinal data on corporate governance may help to identify the changes within a firm over time. However, of this time series data has compelled us to use the variations in corporate governance between-firms at distinct life-cycle stages. The study finds that mature firms as being high in resources are better governed overall. Transparency, responsibility, and accountability are higher in growth firms, whereas discipline and independence improve as firms mature. The results of the study recommend that governance functions such as monitoring/control and resource/strategy are significant and relatable at different life-cycle stages.

**Keywords:** Corporate Governance, Organization Life Cycle, Corporate Sector, Regression Analysis, Governance Prediction Model

**JEL Classifications:** G0, G3, G34

## 1. INTRODUCTION

The notion of corporate life cycle has been commonly used in many disciplines like microeconomics (Muller, 1972), Management (Miller and Friesen, 1984) and accounting (Dickinson, 2005). Corporate lifecycle is an idea extracted from Product lifecycle theory as developed by Raymond Vernon in 1966. Companies must reassess and redefine their strategies and innovative capabilities to survive, secure profits, and stimulate growth, as they move from one stage of life cycle to the other (Zahra et al., 2009).

Corporate governance (CG) is apprehensive with the means by which the providers of the funds to corporations assure themselves that they will get proceeds on their investments

(Schleiffr and Vishny, 1997). In narrower terms CG is the relationship between managers, board of directors, shareholders, stakeholders and society. Whereas in broader terms, it incorporates the amalgamation of laws and regulations, listing rules that are helpful in attracting the capital, work efficiently, maximizing the profits, encounter the legal compulsions and meet the other collective expectations. Firms, therefore, have changing level of needs that depends upon the firm life cycle stage and this should be revealed that how a company arrays its governance system throughout the life stages of firm life cycle. Thus, an essential task in corporate governance research is to uncover the diverse arrangements and to assess the effectiveness of various corporate governance practices along with firm's life cycle stage (Filatotchev and Wright, 2006).

Organizational context may be considered as a major catalyst in order to determine the quality of corporate governance practices in any organization. Organizational context is defined as changes in the internal and external strategic resources of the firms and some other stages specific to the OLC of the firms. Older firms that are in their mature phases are expected to possess a “diversified resource pool and professionalized management team.” Hence, need for formal governance mechanisms are greater for such firms as compared to the younger firms. The firms that are comparatively younger and are in their set-up phases on the other hand need to focus more “reputational, capability-related” aspects of governance (Filatotchev and Allcock, 2010).

This paper considers the long-standing debate in the field of organizational life cycle and studies the role of OLC in shaping the behavior of a firm. Many researchers have studied the relationship between the firm life cycle, organizational structures and strategies; Chandler's (1962) seminal work on OLC is related to the firm characteristics such as structures, strategies, progress during OLC etc. The researchers of the firm life cycle theory have an obscurity on the definitions stages of the life cycle as they argued that it arrays from 3 to 6 (Jawahar and Mclaughin, 2001).

According to Miller and Friesens (1984) there are the five stages of the life cycle. Gort and klepper (1982) also agreed upon the five stages of the life cycle but with different typology: introduction, growth, maturity, shakeout and decline. Life cycle theory has been used with many other disciplines as starting from accounting, management control, and finance to corporate governance (Liu, 2008; Moores and Yuen, 2001; DeAnglo et al., 2006; Filatochev et al., 2006).

Research in the last decade in corporate governance has acquired much scrutiny by different researchers (O'Connor and Byrne, 2015). Doidge et al. (2007) concluded that combined outcomes of prior studies discovered gigantic firms experiencing high growth and with the need of extensive external financing are better governed, nevertheless at the same time such businesses may not exercise better corporate governance in the countries where cost of doing so exceeds its benefits.

The aim of this study is to contribute to the literature on governance-prediction studies and to inspect how quality of corporate governance is affected by the varying needs and functions of each OLC stage. The study specifically examines that how a firm's phase of development shapes its behavior in order to assess the quality of corporate governance throughout various life cycle stages in the context of Pakistan.

The Pakistani corporate sector consists of public limited, private limited and SMEs (small medium enterprises). The corporate sector of Pakistan is governed by the Companies Act 1913. The state bank of Pakistan is accountable for directing and observing the financial system and upholding the monetary policy of Pakistan. The role of money and capital markets was formerly performed by the three stock exchanges i.e. KSE (Karachi stock exchange), LSE (Lahore Stock Exchange) and ISE (Islamabad stock Exchange) that are now merged into single PSX (Pakistan

Stock Exchange) in January, 2016. The corporate governance elements were first introduced by the organization for economic Co-operation and development (OECD). According to the codes of corporate governance, the Securities and Exchange Commission of Pakistan 2012 issued that all listing companies have to follow the codes of corporate governance.

Even in the presence of the extensive corporate governance research in Pakistan, the fact that whether and to what extent, governance progresses along the life cycle stages is substantially neglected in literature. This study, therefore, focuses on investigating the impact of firm evolution on its quality of corporate governance while trying to get an answer for “How does Quality of Corporate Governance practices respond to an Organization's Life Cycle Stage? “Primary objective is to identify whether quality of corporate governance practices vary along different phases of Organizational Life Cycle and secondly, we also measure the extent of variation by observing five distinct variables of quality of corporate governance including management discipline, transparency, responsibility, independence and accountability.

Management discipline here refers to as the commitment of managerial staff to the sound governance practices as the success of any organization depends upon the extent of practical application of superior quality governance principles. Henceforth, the role of the management is desired to be to work in the best interests of the company due to the fact that if management properly follows the codes of CG, it maximizes the firm performance and firm value (Hu and Zoo, 2008). On the other hand, transparency reveals the ability of outsiders to assess the true position of the company or permitting the truth to be known by others. An effective corporate governance system and requirement for transparency are needed not only for economic development but also for the industries aiming growth in the next period (Gilson, 2000).

Responsibility in the meanwhile means the recognition of the rights of the stakeholders and effective corporate governance should recognize these rights that are in accordance with law and encourage an active collaboration among the stakeholders and corporations in creation and maximization of wealth and viability of a sound enterprises. Whereas, the independence of the board is a key part of the corporate governance and the independent members on the board support the effectiveness of the monitoring and control (Faleye, 2011). Different authors have differing viewpoint in this regard; such as some believe that an increase in the level of independence leads to the better performance of the firm (Lefort and Urzua, 2008) while others are in the favor of stance that independence of directors neither harms nor increases the level of performance of the firms (Duchin et al., 2010).

Finally, the last CG measure used in the underlying study is accountability which in effective governance system is the monitoring of management by the board where the board is accountable to the shareholders of the company. The objective of an effective corporate governance system is to ensure all parties that corporate decisions are made for the welfare of the corporation and stakeholders believe that corporate officials communicate truly with the fund providers and public(Sale, 2004).

Using a governance prediction model, the study finds that the mature firms as being high in resources are better governed overall. Transparency, responsibility and accountability are higher in growth firms while discipline and independence improves as firms mature.

The paper advances as follows; the next section provides literature review. Section 3, 4 and 5 describes data, methodology and discussion on findings respectively while section 6 concludes the study.

## 2. RELEVANT LITERATURE

The advent of 21<sup>st</sup> century has been quite productive for the Corporate Governance field because it has received considerable attention from business world, global organizations, governments and research institutions. As a matter of fact, the pragmatic outcomes of the nature of corporations' hierarchical structures and the ways they are interlinked and operationalized are often ignored as conventionally they are held responsible to achieve the goals of market value and profitability (Hopt, 2002). Over the past few years this scenario has changed. We notice the trend of organizations to expand their activities and systems beyond traditional mapping of activity sequences and surface-level outcomes to in-depth evaluation of the impacts of every phase, stage and activity linked to overall inter- and intra-organizational level systems and procedures (Kallunki and Silvola, 2011).

In this way, CG has gone mainstream embracing a dynamic representation that integrates multiplex of variables to explicate different forms of CG in terms of industry types, size of the organization, performance related risk factors and so on. Subsequently, it is urged that corporations need not to disregard unequivocal signs of the impacts created by company's practices during different stages and phases as they provide a deeper understanding of how CG is affected in terms of quality and long-term sustainability of organizational goals and corporate value (Khurshed, 2003).

In this relation, the review of already established studies is indispensable to develop the framework for current study. It is of primary concern to ascertain how different researches explore the concept of CG in relation to corporate life-cycle theory and especially how various arguments have been operationalized to apply the conceptual design to real world corporate systems and structures. Profound understanding of underlying ideologies and theoretical assumptions of CG is needed to develop a rationale why firm life cycle theory has become so important to explain the impacts of deviations on the quality of CG across life-cycles (Robert, 2003).

Keeping with the above, our review of the literature focused on the correlation of CG and corporate life-cycle stages. A range of research studies have been reviewed and analyzed which put forth discussions from existing literature as well as their own hypotheses and arguments, providing different viewpoints on the topic. The core argument is developed on how corporate life-cycle stages affect (positively or negatively) the quality of a firm's CG. What are the issues and risks implied; what are the difficulties have been identified and which are the controllable variables that have an

impact on significant formal CG patterns. Is there actually space to maximize quality and drive positive change simultaneously?

In essence, the concept of CG entails a chain of corporate, legal and economic concerns and issues in relation to the systematic patterning of structures, mechanisms and units of a firm through which it is controlled, organized and operationalized (Vallabhaneni, 2008). Nevertheless, these are historical, institutional and financial frameworks along with principal corporate objectives and goals which decide the way CG is approached and adopted (Knudsen, 1995). For this reason, we could only value what truly is at risk in terms of the implications of CG by exploring their key perspectives and various possible explanations for miscellany of models at work globally. Regarding this, 'principal agent theory' has been the primary ideological influence underlying CG, and even governing to the extent that now scholars have become conscious of the extensiveness of the nature of current literature on CG that they have started arguing that these dynamics have started introducing a desperately constricted viewpoint on CG (Filatotchev et al., 2006). On the other hand, 'institutional theory' could be seen an explicatory version to the uniform standing on CG found in the literature. The particular means and methods under consideration, organizational isomorphism, connected to the general tendency of firms in masses to imitate other firms that function under analogous corporate environment (Lynall et al., 2003).

Another research dynamic in CG integrates 'resource dependency theory' to examine how certain structures in CG could have positive effects on firm's performance (Liu, 2008). For instance, the existence of independent board-members is examined to be effective to strengthen the monitoring efficiency of the board (Faleye, 2011). Although this argument has been widely criticized especially in developing countries, recently it has been brought into focus in developed world too. Chien et al., (2012) seek a linkage between ownership structure and firm's performance and how life cycle stages affect the relationship between administrative ownership structure and achievement of company's goals and quality performance. This has also been discussed in Demsetz and Villalonga (2001)'s empirical study which carries out an in-depth analysis including various stances such as the endogenous determinants, time frame, aptness of the adopted CG model and ownership structure. They imply the multidimensionality of ownership as a conditional variable to check the quality performance of the ownership structure. Both studies discuss CG life cycle stages in relation to ownership structures; consider ownership structure to be one of the biggest challenges and implied outcomes that could affect organizations' direct and indirect benefits in term of quality performance.

According to Chien et al., (2012)'s major findings, life cycle stages have an effect on the relationship between corporate performance and managerial ownership structure. Managerial ownership affects corporate performance in growth and maturity stages but not the life cycle as a whole. It has further been found that age and size are the most frequent and fundamental characteristics in life cycle frameworks and positively link to Tobin's Q that is firm performance (Tam and Tan, 2007).

As the current study is positioned within arena of CG referring to governance-prediction studies (O'Connor and Byrne, 2015), the firm

specific governance rankings, executed either as an inter-country case study or an intra-country analysis are of special focus so as to determine country or firm specific factors that predict the quality of corporate governance (Klapper and Love, 2004; Black et al., 2006). Moreover, other firm level variables of CG practices considered in this regard include firm growth, size, need for external financing, tangibility of assets, cross listing of firms (O'Connor and Byrne, 2015), ownership structure and cash holdings (Doidge et al., 2007). However, issues such as how to make certain that management functions for the benefits of the shareholders and which structures drive corporate value are significant in traditionally long-established stream of corporate governance literature.

One approach to delve into these contingent CG dynamics is the studies developed on firm-life cycle theory (Jaafar, 2011). Within this stream of exploration, it has been how the different demands of organizations analyzed at each life cycle stage impact the CG mechanisms and structures (Filatotchev et al., 2006).

To conclude based on the literature review above, we had identified the following gaps in the context of current research: (i) The basic argument of the current research in the field of CG has evolved around variables such as monitoring, board composition, the role of CEO and ownership structures. No significant effort has been made to investigate the impact of these variables on the quality of CG in relation to corporate life cycle stages especially in Pakistani context. (ii) A limited set of research studies looks into the development narrative of corporate governance in organizations across their life cycle. Particularly, in Pakistani context, the existing research lacks in academic and empirical support. (iii) Principal-agent theory, resource dependence and stakeholder theory have been the most significant influences underlying current research studies. Although they helped to develop a uniform focus as the mainstay of research and theoretical framework simultaneously, however, a more comprehensive framework is required to investigate the complex interplay of CG and corporate performance along with the stages of corporate life cycle.

However, the gaps and inconsistencies in existing literature could be ascribed to the various research dimensions and relative methods capturing different dynamic of the corporate life cycle. The purpose of this study is to explore how functions and operations within various life cycle stages may affect the corporate governance in Pakistani corporate organizations. The study is designed to test one primary and five secondary hypotheses stated below:

- H<sub>1</sub>: All else being equal, Quality of Corporate Governance significantly respond to the OLC Stage.
- H<sub>1a</sub>: All else being equal, Quality of Responsibility function as an element of CG significantly respond to the OLC Stage.
- H<sub>1b</sub>: All else being equal, Quality of Discipline function as an element of CG significantly respond to the OLC Stage.
- H<sub>1c</sub>: All else being equal, Quality of Transparency function as an element of CG significantly respond to the OLC Stage.
- H<sub>1d</sub>: All else being equal, Quality of Accountability function as an element of CG significantly respond to the OLC Stage.
- H<sub>1e</sub>: All else being equal, Quality of Independence function as an element of CG significantly respond to the OLC Stage.

### 3. DATA AND METHODOLOGY

We used the following conceptual model to guide the empirical framework of the study. We are specifically interested in the growth and maturity stages out of following four quadrants of shown in Figure 1. Here, Quadrant 1 shows Introductory Stage, Quadrant 2 shows Growth Stage, Quadrant 3 shows Maturity Stage and Quadrant 4 shows the Declining Stage. This study uses profitability ratio i.e.RE/TA (re/ta = retained earnings to total assets ratio) as a proxy for OLC stages as used by DeAngelo et al. (2006), Brokeman and Unlu (2011) and O'Connor and Byrne (2015). As we made public companies as the part of our sample; only mature and post) IPO<sup>1</sup> (initial public offering) firms are selected as a sample because quadrant 1<sup>st</sup> and 4<sup>th</sup> of Filatotchev (2006) consists of private firms. The reason behind this pattern of work is that it is not mandatory for private firms to follow the code of corporate governance; therefore, it becomes difficult to obtain their data (O'Connor and Byrne, 2015).

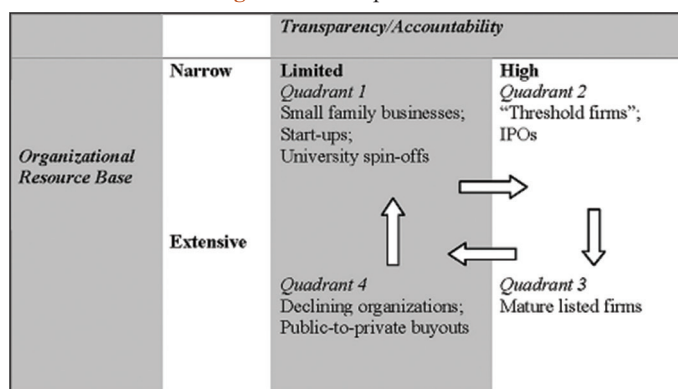
We have employed a multi-stage sampling technique in the study. Where in the first phase, we selected companies listed with KSE out of all companies registered with SECP (population). Following the pattern described above; in the second phase, we selected top firms from the sectors described by the KSE that were also the part of KSE 100 index. KSE 100 index consists of 100 top firms of 35 sectors. We picked top firm from each sector (we assumed commercial banks, real estate investment trusts, investment banks, insurance companies and Mudarabas as a single sector which reduces the number of sectors to 31).

In the next phase of sample selection, recent non-financial IPO's are selected for the sample from 2007 to 2012 making our sample to a total of 46 (31+15) firms listed with KSE. The intention behind such an approach is to get a balanced mix of Quadrant 2 and Quadrant 3 firms as proposed by Filatotchev et al. (2006).

For the purpose of analysis; RE/TA was calculated for each firm from their financial statements. The sample of 46 companies is further divided into 4 quartiles to meet the requirements set in Table 1. The detailed description of this sample is given in Table 2.

1 This is the first time issuance of common stock by a public limited company. The first time a company offers its shares to be purchased by general public.

Figure 1: Conceptual model



Source: Filatotchev et al. (2006)

Main variables of the study are obvious in figure 2 above. Still other side of the coin cannot be ignored as there are certain variables which impact the quality of corporate governance in addition to independent variables of our interest. Therefore, such variables were required to be controlled otherwise results of proposed study may possibly be contaminated. Table 3 shows the set of variables used in the analysis along with a brief description.

Data for quality of corporate governance practices as practiced by sample firms under consideration is collected through a questionnaire developed by *Credit Lyonnais Securities Asia* (CLSA) referred to as CLSA Corporate Governance Index which consisted of 32 selected binary response requiring questions about all five dimensions of quality of CG. This Index was also used by Thomas O'Connor (2015) for an inter-country corporate governance study but was not yet used by any researcher up till now of Pakistan. The original questionnaire encompassed seven CG dimensions including Transparency,

Discipline, Accountability, Responsibility, Independence, Fairness and Social Responsibility. For which 15% weights were assigned to first six dimensions and 10% to Social Responsibility. This demonstrates that as per CLSA except Social Responsibility, all other dimensions contribute equally in quality of corporate governance. As this study uses first five dimensions, hence equal weightage is assigned to all components. Moreover, we use the scoring technique proposed by CLSA. With the help of equation 1 weighted average scores are calculated for measuring quality of corporate governance. The detail of scoring factors is provided in Table 4.

$$\begin{aligned} & (X_1 - x_1) \times 20\% + (X_2 - x_2) \\ & \times 20\% + (X_3 - x_3) \times 20\% \\ \text{Total Scores (ppt)} = & \frac{+(06 - Z_1)(08 - Z_2)(07 - Z_3)}{(X_4 - x_4)} \times 20\% \\ & \frac{+(X_5 - x_5)}{(06 - Z_5)} \times 20\% \end{aligned} \tag{1}$$

**Table 1: Criteria to select sampled firms**

Quartiles	Life cycle stage	Source
Quartile 1 <sup>st</sup>	Pre Growth Stage	O'Connor and Byrne (2015)
Quartile 2 <sup>nd</sup>	Growth Stage	
Quartile 3 <sup>rd</sup>	Pre Maturity Stage	
Quartile 4 <sup>th</sup>	Maturity Stage	

Above table describes topology of quartiles as that of OLC stages under observation

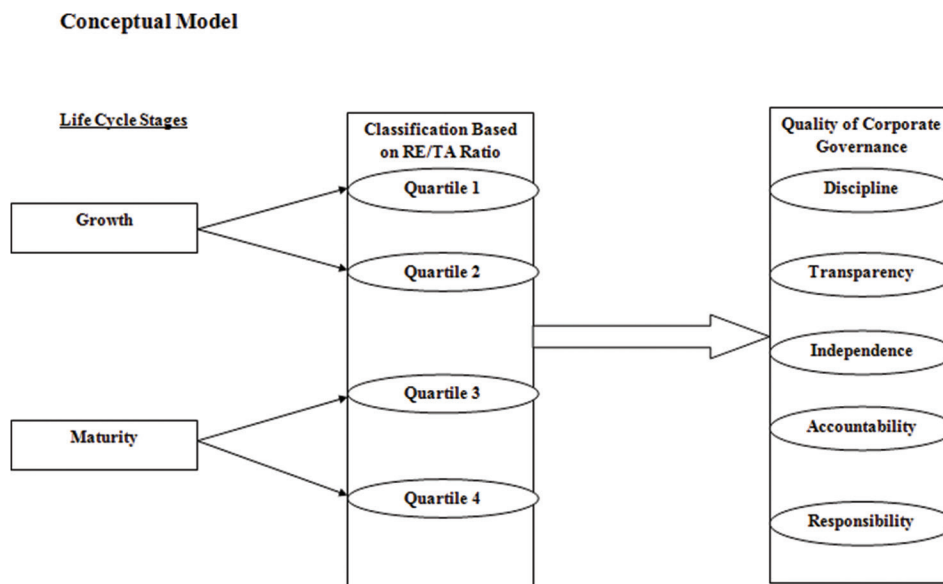
We use cross sectional data for analysis. The analysis is done using OLS model and Logistic Regression model. Data sources include annual reports of sample companies downloaded from their respective websites and different reports and announcements in

**Table 2: Descriptive statistics of the firms sampled**

RE/TA	QUARTILE_1	QUARTILE_2	QUARTILE_3	QUARTILE_4
No. of Firms	12	11	11	12
Mean	-15.59666	0.211416	0.461295	0.851434
Median	0.0782	0.217064	0.45864	0.714253
Maximum	0.133117	0.260434	0.567322	1.983059
Minimum	-172.1109	0.152207	0.320735	0.633024
Std. Dev.	51.90993	0.041166	0.068015	0.384733

Above table describes the basis of sample selection for each quartile, where Row 5 and 6 demonstrates the range within which values fall for each quartile

**Figure 2: Organizational and corporate governance dynamics**



Source: Designed by Authors

the company announcement section of KSE official website. The OLS model with and without robust standard errors is specified in the following manner given in equation (2) below:

$$CG_i = \beta_1 LC_1 + \beta_2 LC_2 + \beta_3 LC_3 + \beta_4 LC_4 - \beta_5(SIZE) + \beta_6 GROWTH + \varepsilon_i$$

Here;

WCG = Weighted corporate governance scores

$\beta$  = value of coefficient

LC1 = OLC Quartile 1 firms

LC2 = OLC Quartile 2 firms

LC3 = OLC Quartile 3 firms

LC4 = OLC Quartile 4 firms

$\varepsilon_i$  = is the disturbance term

Next, to apply logistic regression we first convert our dependent variable into the form of a dichotomous variable. For this purpose; quality of corporate governance is coded in such a way to record two set of responses i-e good governance and poor governance. As a part of sensitivity analysis we have added Size (log\_A) and Growth as control variables to check the robustness of the results.

Hence following model is specified according to Binary Logit (quadratic hill climbing).

$$CG_i = \beta_1 LC_1 + \beta_2 LC_2 + \beta_3 LC_3 + \beta_4 LC_4 - \beta_5(SIZE) + \beta_6 GROWTH + \varepsilon_i \tag{3}$$

Here;

CG<sub>i</sub> = Corporate Governance Index Value is constructed as a binary variable that is assigned value “1” governance score is greater than or equal to 0.5 and “0” otherwise )

### 4. RESULTS AND DISCUSSION

Quality of corporate governance is supposed to be observed along all four quartiles of sample firms. For the purpose mean, median, maximum, minimum and standard deviations are calculated for all four quartiles on the basis of CGI scores (Table 5). Afterwards descriptive statistics for individual CG components are extracted along the same four quartiles (Table 6).

**Table 3: Description of variables**

Dependent variable		Description	Source
Quality of Corporate Governance	Management discipline	Reveals public commitment to corporate governance	CLSA 2010
	Transparency	Reveals the ability of outsiders to assess the true position of the company	
	Independence	Reveals whether the board is independent of controlling shareholders	
	Accountability	Designed to capture the proper accountability of management to the board	
	Responsibility	Record measurement in case of mismanagement	
Independent variable			
Corporate Lifecycle	Retained Earnings to Total Assets		Filatotchev et al. (2006)
Control variables			
SIZE	Log of book assets		O'Connor and Byrne (2015)
Growth	Logarithmic one-year asset growth		
Profitability	Earnings before interest and taxation (EBIT) to book assets		
Leverage	Total Debt to Total Assets Ratio		Black et al., (2006)

Above table describes the detailed description of dependent as well as explanatory variables

**Table 4: Weights assignment of governance quality components**

Scoring factors	Discipline	Transparency	Independence	Responsibility	Accountability
Weight Assigned	20%	20%	20%	20%	20%
No. of Indicators	06	08	07	05	06
Positive Score	X1	X2	X3	X4	X5
No Score	Y1	Y2	Y3	Y4	Y5
Negative Score	-x <sub>1</sub>	-x <sub>2</sub>	-x <sub>3</sub>	-x <sub>4</sub>	-x <sub>5</sub>
Non-applicable	Z <sub>1</sub>	Z <sub>2</sub>	Z <sub>3</sub>	Z <sub>4</sub>	Z <sub>5</sub>

This table is provides an insight of scoring of dimensions with the help of equation 3.1.

**Table 5: Quartile-wise descriptive statistics of the firms**

Descriptors	QUARTILE_1	QUARTILE_2	QUARTILE_3	QUARTILE_4
No. of Firms	12	11	11	12
Mean	0.522916667	0.525909	0.445758	0.554722
Median	0.518333333	0.555	0.456667	0.598333
Maximum	0.698333333	0.64	0.621667	0.695
Minimum	0.325	0.316667	0.186667	0.251667
Std. Dev.	0.096006431	0.102489	0.139591	0.139407

Above table displays results of descriptive statistics as an estimation of overall weighted CGI score along four distinct quartiles

As per the table above, mean value of average scores of corporate governance shows that in first quartile it was 52.29% demonstrating good governance which is more increased in 2<sup>nd</sup> quartile to be 52.59% depicting a little more improvement in the CG quality. While in the third quartile value of mean scores suddenly decrease to a value of 44.57% revealing poor quality of CG relative to both previous quartiles. Afterwards for the next and the last quartile firms under observation mean value has dramatically increased to 55.47% which denotes the best quality of CG amongst all quartiles. These findings are confined with those of O'Connor and Byrne (2015). Here as per the sample statistics; mean deviations are expected to be highest in 3<sup>rd</sup> and 4<sup>th</sup> quartile relative to other two quartiles.

Above table displays the averages of each dimension in their each respective quartile. The results display discipline being highest in Quartile4 while Transparency, Independence and Accountability being the most superior qualities of Quartile2 firms where Responsibility was found the only dimension for which Quartile1 firms were revealed to be at best.

Table 7 reports the results from our OLS estimations with and without robust standard errors. The combined results propose that, those firms who have high growth and require external finance are better governed, but the firms with these characteristics may

show weak governance in countries where adopting the better-governance costs more than its benefits (see Doidge et al., 2007). Similarly the findings of this study are not an exception to it due to the fact that coefficients for assets growth are anticipated to produce positive effects in our governance prediction model. Coefficient estimates under models 1 and 2 are statistically insignificant yet consistent.

As firms move from Quartile 1 to Quartile 2 within growth stage, weighted average quality of corporate governance tends to increase. This finding is evident from change in coefficient value as observed in ROW 3 and Row 4 of Table 7. In all of the 4 models of OLS with and without robust standard error; values of coefficient are depicting an increment such as 0.469 to 0.473 under model 1, 0.443 to 0.447 under model2, 0.462 to 0.469 under model 3, 0.463 to 0.469 under model 4, 0.51 to 0.515. Fortunately these results abide by findings of O'Connor's work in 2015. Such a finding predicts quality of corporate governance to experience incremental change as firm's evolve along lifecycle pattern during growth phase. Graphical descriptions discussed above unearth the role of transparency and disclosure being dominant and a major contributor towards improved quality of CG.

On the other hand when firms evolve along Life Cycle Q2 to Life Cycle Q3; an obvious reduction in coefficient values is evident in

**Table 6: Quartile-wise descriptive statistics of corporate governance indicators**

CG indicators	QUARTILE_1	QUARTILE_2	QUARTILE_3	QUARTILE_4
Discipline	0.108333	0.106061	0.081818	0.138889
Transparency	0.139583	0.156818	0.15	0.154167
Independence	0.119444	0.124242	0.10303	0.122222
Accountability	0.105556	0.106061	0.081818	0.102778
Responsibility	0.05	0.032727	0.029091	0.036667

Above table displays results of descriptive statistics as an estimation of individual CGI components' weighted scores along four distinct quartiles

**Table 7: Estimations using ordinary least square method**

Variables	Using All controls		Excluding size		Using leverage only		Without controls	
	OLS	Robust SEs	OLS	Robust SEs	OLS	Robust SEs	OLS	Robust SEs
Quartile 1	0.469* (0.128)	0.469* (0.13)	0.443* (0.040)	0.443* (0.04)	0.462* (0.04)	0.462* (0.03)	0.463* (0.037)	0.463* (0.031)
Quartile 2	0.47* (0.12)	0.47* (0.125)	0.45* (0.041)	0.45* (0.038)	0.47* (0.039)	0.47* (0.035)	0.469* (0.038)	0.469* (0.035)
Quartile 3	0.37* (0.12)	0.37* (0.12)	0.34* (0.045)	0.34* (0.048)	0.36* (0.045)	0.36* (0.046)	0.36* (0.044)	0.36* (0.045)
Quartile 4	0.48* (0.121)	0.48* (0.133)	0.45* (0.044)	0.45* (0.055)	0.49* (0.039)	0.49* (0.04)	0.48* (0.04)	0.487* (0.045)
Profitability	0.005* (0.002)	0.005* (0.001)	0.01* (0.002)	0.005* (0.001)	0.005* (0.002)	0.005* (0.001)	0.005* (0.002)	0.005* (0.001)
Size	-0.003 (0.014)	-0.003 (0.015)						
Growth	0.001 (0.000)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)				
Leverage	0.0001 (0.001)	0.0001 (0.0003)	0.0001 (0.0002)	0.0001 (0.0002)	0.0001 (0.001)	0.0001 (0.0002)		
R- squared	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. R <sup>2</sup>	0.95		0.96		0.95		0.95	
F-calculated	123.51	10860.88	144.68	12580.24	163.12	13034.73	200.51	292.53
Observation	46	46	46	46	46	46	46	46

Above table reports coefficient estimates from ordinary least squares regressions with respective standard errors presented underneath in parenthesis. Eight models stated above encompass two regressions each i-e with and without robust standard errors. The sample period is for the year 2014. The dependent variable of this study is quality of corporate governance. Sign \* represents 1 percent level of significance. All the four models are estimated by changing the control variables one by one

all 8 models of OLS. This reproduce a hindrance effect as firms step into earlier maturity phase right after concluding growth; quality of corporate governance as measured by our CG Index is expected to diminish. In all (with and without robust standard error) OLS models coefficients while being at 1% level of significance; shrink in such a way so as to from 0.473 to 0.368 in model1, 0.447 to 0.344 in model2, 0.47 to 0.36 in model3, 0.469 to 0.359 in model4. These results are again aligned with those of O'Connor and Byrne (2015). Sample firms under consideration are undoubtedly depicting a declining trend in all five components of quality of CG i-e discipline, transparency, accountability, responsibility and independence.

In contrast as firms move from 3rd Quartile to 4th Quartile along maturity phase of OLC; while learning from their deficiencies, quality of corporate governance is anticipated to not only increase than that of Q3 but weighted average CG scores are also expected to be highest among all four quartiles. This finding is evident from change in coefficient value as observed in ROW 5 and Row 6 of Table 7. O'Connor and Byrne (2015) also manifested such sort of findings for movement in weighted average quality of corporate governance along OLC's Q3 to Q4. Same pattern of association can be observed in graphical description of weighted average quality of CG score by the incremental moves of all five components of our quality index including discipline, transparency, accountability, responsibility and independence. In a nut shell if we observe quality of corporate governance as firms evolve from Life Cycle Quartile1 to Life Cycle Quartile4; most mature firms experience better governance practices than that of immature/growing firms. Coefficient estimates are showing increase from Q1 to Q4 like a movement of 0.46 to 0.479 in model1, 0.443 to 0.45 in model2, 0.462 to 0.487 in model3, 0.463 to 0.486 in model4. Such a pattern was also observed by O'Conner (2015) and Filatovchev et al. (2006). We further observe that at early stages (public) life-cycle, firms show more accountability and responsibility, i.e. Q1 firms, while both these practices (accountability and responsibility) deteriorates as firms mature. Rest of three CG components i-e discipline, transparency and independence are higher in most mature firms of Q4.

Table 8 below reports the results from the logistic regression analysis. All of the coefficients of following table are indicating anticipated signs and all of them are highly significant (four variables at 5% level of significance and two variables at 10% level of significance). Coefficient approximations from this study

**Table 8: Estimation results using logistic regression**

Variable	Coefficient	Std. Error	z-Statistic	Prob.
Quartile 1	8.106486	3.610050	2.245533	0.0247
Quartile 2	6.611707	3.259391	2.028510	0.0425
Quartile 3	5.078839	2.875388	1.766314	0.0773
Quartile 4	6.408857	3.114699	2.057617	0.0396
LOG_A	-0.714223	0.377344	-1.892763	0.0584
GROWTH	0.062022	0.036322	1.707541	0.0877
Obs with Dep=0	10	Total Observations	46	
Obs with Dep=1	36			

Above table encompasses results of Logit model when we converted our dependent variable into binary arrangement by dividing them into 1 and 0 as good and poor governance respectively

predict that growing firms practice better corporate governance as compared to mature firms.

Relationship of Size and Quality of Governance is opposite to the findings of Klapper and Love (2004) and Black et al. (2006). However, it is consistent with the findings of O'Connor and Byrne (2015). On the other hand, Firm growth's positive coefficient that reveals a direct relationship between growth and Quality of Corporate Governance remained robust in both OLS and logistic regression in line with the study by Doidge et al. (2007).

Logistic regression estimates on OLC stages are inconsistent with the eight OLS regressions applied earlier in a way that 1st quartile contain maximum number of firms having good governance i-e WACG scores to be more than 0.43 (min.+range/2). While 3rd Quartile firms are still portraying the same sort of results as was in OLS models for maximum number of firms in this quartile are observed to have poor governance.

Detrimental movement of coefficients (i-e 6.611 to 5.078) when firms move from OLC Q2 to OLC Q3 is exactly matching the movement of coefficients as was in OLS and descriptive statistics. Thus as firms move from 2nd quartile of growing phase to 3rd quartile along maturity phase, quality of corporate governance diminishes as were the findings of O'Connor and Byrne (2015). In contrast to recent trend of movements, results of LOGIT anticipates coefficients to demonstrate an incremental trend in quality of corporate governance as firms move from Q3 to Q4 of OLC (i-e 5.078 to 6.408). These findings are again consistent with not only our OLS models but also descriptive statistics as discussed above.

Dissimilar to Klapper and Love (2004) and Black et al. (2006), this study demonstrates that small sized firms are expected to be better-governed than that of large sized firms. A negative sign of the coefficients of Size variable in both OLS and Logit models reveals this fact. Surprisingly, neither growth nor need for external finance is significantly related to quality of corporate governance.

Average Corporate Governance is relatively high in the firms comprising in 4th quartile. On the other hand 3rd quartile demonstrates the lowest scores as measured by the corporate governance index. Surprisingly 1st two quartiles which encompass growth firms are found to have approximately average same level of corporate governance quality i-e 52.29% and 52.59% in Q1 and Q2 respectively which is undoubtedly better than 3rd quartile firms but relatively poorer than that of 4th quartile firms. Our findings are similar to Filatovchev et al. (2006) and O'Connor and Byrne (2015) findings.

### 5. CONCLUDING REMARKS

The research is designed to investigate the influence of life cycle stages on excellence of corporate governance in Pakistan. For the purpose, we use RE/TA ratio as the proxy of life cycle and five corporate governance dimensions as demonstrated in CLSA (2010) questionnaire to assess the quality of corporate governance. CLSA questionnaire uses 46 binary response questions to evaluate the excellence or worth of corporate governance dimensions:



discipline, transparency, independence accountability and responsibility. Moreover, to manage the influence of omitted *variable bias*, we have used a rich set of control variables. After collecting data from 46 KSE listed companies, OLS regression and Logit regression models are employed to analyze the nexus between OLC and corporate governance.

The outcomes of the study disclose that quality of corporate governance significantly responds to the OLC stages resulting in the acceptance of our major alternate hypothesis. Most mature firms experience better governance practices than those of immature/growing firms. Such a pattern was also observed by O'Conner (2015) and Filatochev et al. (2006). We further conclude that firms are inclined to be highly accountable and responsible during the early phases of their public life-cycle, i.e. Q1 firms; however accountability and responsibility gradually decline as the organization gets mature. Our results thus contribute to the opinions that the governance rules be placed into operation.

Thus, we conclude that the one size fit governance code is not appropriate in the corporate environment of Pakistan. The corporate governance codes should be made more flexible and accommodating, separate codes for homogeneous nature firms or industries, or it should be developed in such a way that it appropriately suits to organizations at different stages of their life cycle.

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