

## Political Connections impact on Corporate Governance Quality

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### ABSTRACT

*The paper explores political connections impact on corporate governance quality in Indonesia. Using data from publicly listed firms in Indonesia stock exchange for the 2010-2019 period, this study find that politically connected firms are actually having better corporate governance quality than their counterparts. The significant development on corporate governance system implementation and changes in political system may influence the political connections impact on corporate governance quality. Additionally, the findings also indicates that the political connections improve board efficiency, risk management and stakeholders relationship. The findings from this study is markedly dissimilar from previous studies that emphasize on the rent-seeking nature of political connectedness. Institutional setting changes such as the changes in political system and corporate governance system may changes the nature of politically connected firms to become more responsible. The results maybe of interests for regulators of emerging countries around the world and shed a new paradigm on political connectedness. The findings of the papers indicates that the design of regulatory frameworks and policies should consider the potential positive effects of political connections, rather than simply focusing on potential drawbacks. The results indicate that promoting political connections that are accountable and transparent can be beneficial for the investment environment.*

### ABSTRAK

Artikel ini membahas dampak koneksi politik (political connectedness) terhadap kualitas tata kelola perusahaan di Indonesia. Dengan data dari periode 2010-2019 untuk perusahaan tercatat di pasar saham Indonesia, studi ini mengindikasikan bahwa perusahaan dengan koneksi politik memiliki kualitas tata kelola perusahaan yang lebih baik daripada perusahaan tanpa koneksi politik. Perkembangan yang signifikan pada implementasi sistem tata kelola perusahaan dan perubahan dalam sistem politik mungkin mempengaruhi hubungan antara keterkaitan politik dan kualitas tata kelola perusahaan. Selain itu, hasil juga menunjukkan bahwa dampak koneksi politik terhadap kualitas tata kelola perusahaan akan lebih kuat di dalam perusahaan dengan efisiensi dewan yang lebih baik, manajemen risiko yang lebih baik, dan hubungan pemangku kepentingan yang lebih baik. Temuan dari studi ini berbeda dari studi sebelumnya yang menekankan pada sifat rent-seeking dari keterkaitan politik. Perubahan lingkungan institusional seperti perubahan dalam sistem politik dan sistem tata kelola perusahaan dapat merubah sifat perusahaan dengan koneksi politik menjadi lebih bertanggung jawab. Hasil ini mungkin bisa berguna bagi regulator negara berkembang di berbagai belahan dunia dan memberikan paradigma baru tentang koneksi politik.



## INTRODUCTION

This paper explores political connections impact on quality of firm's governance in Indonesia, using corporate governance quality index as a proxy. We further investigate whether there are different effects of political connections for each sub-elements of the corporate governance quality index (board effectiveness, risk management, shareholders relationship and stakeholders' relationship). This research is driven by the absence of proof for the beneficial effect of political connectedness on governance quality. Previous literature on the value of having political connectedness suggest two behavioral approach : first, political connections is a tool for the opportunistic rent-seeking activities (Jensen and Meckling, 1976, Krueger, 1974) and second, political connections is a tool for accountable behavior (Donaldson and Davis, 1991, Djankov et al., 2010). Nevertheless, the results regarding the impact of political connectedness so far tends to support the rent-seeking (opportunistic behavior) of firm with political connections. Firms with political ties are related with lesser quality of corporate governance, even more so in countries with lax minority investors' protection and weak legal implementation system (Faccio, 2010, Bussolo et al., 2022).

Several factors can cause the adverse impact political connections have on firm's governance. Firstly, the need to keep the cost and benefits of political connectedness confidential as these may not be entirely legal (Braam et al., 2015) requires firms to conceal the nature of political connectedness from public knowledge. Secondly, the benefits gain from political connectedness may result in privileges that eliminate the need for good corporate governance. For instance, firms with political ties may receive preferential treatment from creditors (Bussolo et al., 2022) and investors (Shin et al., 2018) despite poor earnings quality, which is indicative of poor corporate governance quality.

Most prior research has focused on the rent-seeking, opportunistic behavior perspective, where political connections become an alternative to replace good corporate governance practices. However, more recent studies provide some findings to back the responsible behavior perspective. Bona-Sanchez et al. (2014) discovered that increased transparency and improved corporate governance systems can change the behavior of large and dominant shareholders, who may see the appointment of board members with political ties as an opportunity to enhance the firm's earnings quality and reputation. Bona-Sanchez et al. (2019) also emphasized the governance role of appointed board members with political connections for family firms in Spain.

Moreover, political connections can also provide companies with access to a wealth of information and expertise that can help them make more informed decisions. For example, companies may receive insights into emerging trends and regulatory changes that can affect their operations, allowing them to respond quickly and effectively. Companies that are closely connected with the political establishment are also more likely to be aware of any upcoming changes in laws, regulations, and policies, giving them a significant advantage over their competitors.

This paper examines the effect of political connections on governance quality among listed firms in Indonesia. The sample comprises of firms from non-financial and non-utilities industry sector listed in Indonesia from 2010 to 2019. Our definition of political connections aligns with previous research (Faccio, 2006), with several changes to better reflect the Indonesian context. Firms are categorised



as politically connected if any of the appointed member of the boards has held a political position such as Member of Parliament, minister, or high-ranking public servant, including former generals of the police or military branches.

Indonesia is a suitable environment to study the stewardship theory regarding political connections because of several reasons. Firstly, Indonesia underwent significant political, economic, and legal reforms following the financial crisis that hits the Asian region in the late 1990s. Previously, Indonesia had an autocratic ruler, weak investor protection, and inadequate corporate governance (as noted by Claessens and Fan, 2002, Johnson et al., 2000, Fisman, 2001). However, over the past twenty-five years, Indonesia has undergone a significant transformation in its political system, with a decentralized, democratic, and civilian political power replacing the old system (as observed by Booth, 2005, and Horowitz, 2013).

Additionally, the transformation of the political system resulted in advancements in the financial sector and corporate governance practices. The role of international organizations, such as the IMF, was crucial in driving these improvements. The aid provided to the Indonesian government came with mandates for institutional and financial sector reforms (Pangestu, 2003). This has led to the adoption of IFRS (the global accounting standard) into PSAK (Indonesian Accounting Standard), along with the international standard for audit (Maradona and Chand, 2018, Luthan and Satria, 2016), as well as the creation of the national manual for corporate governance in collaboration with international institution (2012).

Furthermore, the changes in political system and good governance implementation also affected the nature of political connectedness in Indonesia. After the reform the regulations banned active high-ranking government officials from engaging in business activities. As a results, political connections in public listed Indonesian firms changes from one to incumbent ruler (Fisman, 2001) to former politicians. In Indonesia, political connections differ from other countries where they are often with current politicians like presidents (Schoenherr, 2019), prime ministers (Saeed et al., 2017, Bunkanwanicha and Wiwattanakantang, 2009), parliamentary members (Pham, 2019), or high-ranking public servant (Pan and Tian, 2017). While there are several active members of parliament appointed as board members, most politically connected board members in Indonesian listed firms serve as members of the supervisory/non-executive board (BOC).

Third, despite all of the development and improvement, Indonesia is still viewed as having a lax minority shareholders protection and not very strong legal enforcement (Enomoto et al., 2015). Furthermore, the situation where large shareholders holding high level of concentrated ownership can also increase potential expropriation of investors (Carney and Hamilton-Hart, 2015). The combine negative effect of all these problems could lessen the influence of corporate governance implementation.

As such, the exploration into the role of political connectedness using Indonesian setting can still produce evidence that further support the rent-seeking opportunistic view. However, there is also a probability that it can provide further evidence that can support the accountable view, responsible behavior of appointed politically connected board members. Both results will contribute to the

literature by giving more insight on the political connections effect toward the quality of corporate governance. Although much emphasis has been given to understanding the rent-seeking behavior of firms with political connections, the likelihood of the potential governance functions of politicians in connected firms are largely unexplored.

The findings from this paper indicates that political connectedness have strong and positive impact on corporate governance index, the proxy measures for the quality of governance. The results support the accountable behavior and depart from majority of preceding studies, which concentrated on the rent-seeking opportunistic behavior of firms with political ties. In addition, we further discover that political connection also had strong and significant relationship with better board efficiency, better risk management and better stakeholders' relationship. These results further support the notion that politically connected board members enhanced the quality of corporate governance of connected firms.

The findings add further empirical evidence to the present political connections literature in the ensuing way. This study expanded the literature on the effect of political connections on the quality of corporate governance. In particular, this study aims to address the lack of empirical evidence on the stewardship theory of political connectedness and examine the potential governance function of politicians in enhancing the quality of corporate governance. The results from Indonesia may be of interests for other developing countries around the world which shares similar traits with Indonesia. Additionally, the study's results are robust to various models.

The rest of the paper is arranged in the following order. We presents the institutional context of political connections in Indonesia in Section 2. Meanwhile, in Section 3, our hypotheses are outlined. The details of the research design are explained in Section 4, followed by Section 5 presenting the analysis and discussion of results. Finally, Section 6 concludes the paper.

## **LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT**

The literature presents conflicting results on the political connections effect on the quality of corporate governance. Most studies suggest a substitutionary association, in line with the agency theory's proposition of politically connected firms engaging in opportunistic rent-seeking behavior. This relationship is influenced by factors such as the need to maintain confidentiality surrounding the cost and benefits of political connections, as these may be illegal and therefore must be concealed to maintain the relationship (Braam et al., 2015, Morck et al., 2005). Second, the status as politically connected firms can also eradicate the requirements for good corporate governance. Despite their poor governance quality, firms with political connections continue to be viewed favorably by investors (Shin et al., 2018) and creditors (Bussolo et al., 2022).

However, while limited, some studies also suggest a relationship where political connections enhance the quality of corporate governance, in line with the stewardship theory's proposition of politically connected firms engaging in accountable behavior. According to Bona-Sanchez et al. (2014), as per the decision of their controlling shareholders, firms with higher transparency and better governance

practices may appoint politically connected board members as a means of enhancing their reputation and earnings quality. Another research by Bona-Sanchez et al. (2019) indicates that politically connected board members play a relevant governance role of improving earnings informativeness among family firms in Spain. Khalil et al. (2022) discovered that politically connected firm in Indonesia are engaged less in real and discretionary accruals earnings management activities, while Ahmed et al (2022) discover that connected firms in the US traded real earnings management with accruals earnings management activities.

The paper aims to address a gap in the literature by investigating the effect of political connectedness toward the quality of corporate governance in Indonesia. The country offers several advantageous characteristics that make it an ideal environment to test the complementary relationship between these two factors.

The first important characteristic is the nature of politicians that served as board members in politically connected firms in Indonesia. Appointed board members with political connections in Indonesia are not that dissimilar to Spain (Bona-Sánchez et al., 2019) and United Kingdom (González-Bailon et al., 2013), where former politicians are being selected. This situation is markedly different from other countries where the political connections exist through active public officials such as presidents (Schoenherr, 2019), parliamentary members (Pham, 2019), the prime ministers (Saeed et al., 2017, Bunkanwanicha and Wiwattanakantang, 2009), or high-ranking public servant (Pan and Tian, 2017).

Although the appointment of active politicians as board members carries potentially more influence and power over government policies and the allocation of resources for connected firms, but it also increases the risk of corruption and abuse of power (Schoenherr, 2019, Chen et al., 2008, Saeed et al., 2017). The appointment of former politicians, who bring prestige, reputation, political and business knowledge, connections, and expertise, offers different advantages for connected firms compared to active politicians. (Bona-Sánchez et al., 2014). Moreover, the appointment of former politicians as independent board member may also improve minority shareholders protection (Bona-Sánchez et al., 2014) .

The second important characteristic is the implementation of the two-tiered board model, as well as the restriction on appointing the same person for each tier of the board. The regulatory bodies that design the corporate governance manual in Indonesia acknowledge the problem of high ownership concentration and little separation of ownership and control among listed firms in Indonesia (Carney and Hamilton-Hart, 2015), and choose the two-tier board corporate governance model with the addition of separating the personnel for the two boards to address this issue, in accordance with Jungmann (2006) suggestion that one of the main and essential feature of two-tier model is the separation of the responsibilities of governance and management to increase accountability and ensure the protection of both shareholders and public interests.

The third important characteristic is the appointment of most of the politically board members as supervisory board members among Indonesian listed firms. This leads to a unique setting in Indonesia where the appointed board members with political ties also often serve as independent



commissioners, acting as a watchdog for the firm's performance and ensuring that the firm is operating in the interest of all stakeholders, including minority shareholders. This third characteristic allows for the potential of political connections to be leveraged for the benefit of the firm, as independent non-executive board members can bring valuable resources and provide a check on executive decision making.

The role of independent commissioners is to oversee the management team and ensure that their actions align with the interests of the shareholders (as stated by the Indonesian Corporate Governance Manual, 2012). As they are independent, there are expectation that they will conduct themselves for the best interests of the firm, not just those of the management or majority shareholders. The presence of competent, knowledgeable politically connected independent commissioners with a reputable track record sends a signal to minority shareholders that the controlling shareholders are committed to protecting their interests (Pascual Fuster and Crespí Cladera, 2018, Bona-Sánchez et al., 2019).

With competent, knowledgeable politically connected independent commissioners with a reputable track record serving as board members, firms may improve corporate governance quality, through independent supervision and alignment with shareholder interests. The hypothesis that can be tested as a result of this argument is that:

**Hypothesis 1:** *Political connections have positive impact on firms' corporate governance quality.*

## RESEARCH DESIGN

### Sample Selection Process

The sample for this study initially consists of all publicly traded companies listed on the Indonesia Stock Exchange, excluding those in the financial, construction, and utilities sectors, for the period 2010-2019. We excluded financial, construction, and utilities firms because they are bound to different financial reporting and disclosure requirements. This sample was further narrowed down to firms with complete financial reports, with a requirement of at least 10 observations per year for each industry group.

**Table 3. Sample Selection Process**

Sample Description	No.of firms	Total sample
Firms listed in Indonesia Stock Exchange in 2010	413	4,130
<i>Excluded:</i>		
Firms from financial industry sectors	68	680
Firms with missing/incomplete data for more than 5 years	64	640
Firms with negative equities	21	210
Firms from utilities industry sector	2	20
<b>Final sample</b>	<b>258</b>	<b>2,580</b>



### **Construct validity of the corporate governance quality measure**

In the literature, corporate governance quality is measured through various models that either focus on specific governance traits or use a general governance index. Both methods have limitations. Examining a single governance feature disregards the impact of other factors and may lead to misinterpretation if the analyzed trait is merely a representation of other traits. (Chen et al., 2007). The main challenge with using a corporate governance index is verifying its accuracy as a proxy for the concept it aims to measure. (Black et al., 2017).

In this study, we are using corporate governance index as a measure for corporate governance quality. The index is split into four governance categories. Each category is given equal weighting (25%) in the total index. The corporate governance index as a whole encompass 30 traits of corporate governance, consists of board effectiveness items (15), risk management items (7), shareholders relationship items (4) and stakeholders relationship items (4). The full list and the brief explanation for each element are provided in Appendix 1 and 2.

To ensure that both index are valid measures of corporate governance quality, we follow the two methods used by Black et al.(2017) to assess the construct validity of our two corporate governance quality measures along with their sub-indices: Cronbach's  $\alpha$  and principal component analysis (PCA).

#### ***Cronbach's alpha***

Cronbach (1951) introduced the alpha coefficient as a multi-item scale internal consistency general measure (Peterson, 1994), following this formula:

$$\alpha = \frac{nr}{1+(n-1)r}$$

where  $r$  is the average correlation between the components and  $n$  is the number of components in the measure. The resulting score ranges from 0 to 1 with higher Cronbach's  $\alpha$  scores mean that the parts of a governance components measure are related to each other, indicating a consistent concept of governance (Black et al., 2017).

Appendix 2 reports on Cronbach's  $\alpha$  and mean inter-item correlations for the CG Index. Panel A looks at each governance element individually. The CG Index has a strong Cronbach's  $\alpha$  score of 0.74 and low average of inter-element correlations (0.09 or 9%). The combination of low mean correlations and high  $\alpha$  values suggests that the elements effectively capture different aspects of corporate governance.

As robustness tests, the values of Cronbach's  $\alpha$  and inter item correlation for the overall governance indices using sub-indices composites rather than individual elements are also examined. The ideal results would be intermediate correlations between the sub-indices that will suggest that the sub-indices are measuring different underlying constructs. The results are shown in Panel B. Corporate governance index seems to fit this second criteria as well, with intermediate value of average correlations between the sub-indices is only 0.31.



Based on the investigation of Cronbach's  $\alpha$  of the individual elements, sub-indices and individual elements among sub-indices, our judgment is that the corporate governance index appears to be a reasonable and valid construct.

### *Principal Component Analysis*

Principal Component Analysis (PCA) is a statistical method for reducing the dimensionality of high-dimensional data. This technique is used to extract important features from a large set of correlated variables and project them onto a smaller set of uncorrelated variables, known as principal components. These principal components are linear combinations of the original variables, and they capture the most significant variation in the data. It is done through an orthogonal transformation, generating eigenvectors. This means that the variables in the new space defined by the principal components are uncorrelated and independent of each other. Orthogonality is an important feature of PCA, as it reduces the complexity of the data and makes it easier to understand the relationships between the variables. Eigenvectors are vectors that change only in magnitude and not direction when transformed by a linear operation. In the context of PCA, the eigenvectors are the directions along which the data varies the most. Each eigenvector is associated with an eigenvalue, which represents the magnitude of the variation along the corresponding eigenvector. The eigenvectors with the largest eigenvalues are chosen as the principal components, as they capture the most significant variation in the data (Black et al., 2017).

This study follows Black et al. (Black et al., 2017) in constructing principal components by combining elements and sub-indices, and uses a 0.4 cut-off for loading value and varimax rotation. The seven components with the highest eigenvalues for each index (corporate governance and disclosure) are analyzed to form principal components.

The PCA analysis in Appendix 3 Panel A for sub-indices displays balanced and high loading values for most sub-indices in the corporate governance index. The results indicate that the sub-indices effectively represent a unified concept of governance. Therefore, the PCA analysis supports the findings from Cronbach's  $\alpha$  that a comprehensive set of corporate governance factors are necessary to measure overall corporate governance quality. Additionally, the variance explained by the retained factors reinforces the accuracy of the corporate governance index. The retained factors explain 62.34% of the total variance of the sub-indices, indicating that the retained components encompass most of the sub-indices' aspects.

In Appendix 3 Panel B, we examine individual elements and only show 5 (five) components with the largest eigenvalues. These components all load on one category of sub-indices, further indicating their coherence. These components also cover three out of four of the sub-indices in the overall corporate governance quality index, reinforcing the need for a comprehensive approach. The combinations of the five components explain 46% of the variance in the corporate governance index. The next five components with eigenvalues greater than 1 explain another 20% of variance, leaving 34% of the variance in the corporate governance index unexplained. This supports the argument for a broad index to capture variation at the firm level.



### Empirical model

We use the following specification, to test the impact of political connections on corporate governance quality,:

$$CG\_Quality_{it} = \beta_0 + \beta_1 PolCon_{it} + \beta_2 OwnConcen_{it} + \beta_3 Size_{it} + \beta_4 FirmAge_{it} + \beta_5 Leverage_{it} + \beta_6 ROA_{it} + \beta_7 MTB_{it} + \beta_8 Asym_{it} + \beta_9 OperCycle_{it} + \beta_{10} DPR_{it} + \sum YEAR_{it} + \sum INDUSTRY_{it} + \varepsilon_{it} \quad (1)$$

where *CG\_Quality* represents corporate governance index/*CG\_Index*, the proxy to measure the quality of corporate governance. *PolCon* is a binary indicator, coded as 1 if the firm appointed a politically connected board members, and 0 if it doesn't. The definition of politically connected firms follows Faccio (2006) and has been adapted to the Indonesian context. A firm is considered politically connected (*PolCon*) if at least one of its board of directors (BOC/BOD) is a current/former member of parliament, minister, former military/police general, or former high-ranking government official.

We expect a positive correlation between *PolCon* and *CG\_Quality*. This means that we anticipate that politically connected firms will have a higher level of corporate governance quality than non-connected firms. In the study, commonly used control variables from prior literature will also be included. The definitions of all variables can be found in Table 3.

**Table 3. Variable definitions**

Variable	Description
<i>CG_Index</i>	Corporate Governance Index is a continuous variable that ranges from 0 to 1, reflecting the quality of corporate governance as measured by the index.
<i>PolCon</i>	Political Connections, binary variable, represented as 1 (one) if a firm appointed a politically connected board members and 0 (zero) if not.
<i>OwnConcen</i>	Concentrated ownership level, measured as the percentage of shares held by the top 5 shareholders.
<i>Size</i>	The size of the firm, measured using the natural logarithm of adjusted total assets value of the firm. Total assets at the end of the period adjusted for inflation rate
<i>FirmAge</i>	Firm age, measured as the number of years since firm's establishment
<i>Leverage</i>	Leverage ratio, measured as the book value of total debt divided by the book value of total assets
<i>ROA</i>	Profitability ratio, measured as net income divided by total assets
<i>MTB</i>	Market-to-book ratio, measured as the book value of total assets subtracted with the book value of equity, then adding the market value of the equity before dividing it with book value of assets
<i>Asym</i>	Information asymmetry, measured as the natural logarithm of weekly share price volatility.
<i>DPR</i>	Ratio of dividend payment, measured as dividend payment scaled by net income



## **ANALYSIS AND DISCUSSION**

### **Univariate analysis**

Table 4 presents the descriptive statistics of key variables analyzed. Winsorization, a technique to handle outliers, was applied at 1% and 99% levels to all continuous variables. The results show that politically connected firms have higher values for both measures of corporate governance quality, and these values differ significantly from firms without political connections. The controlling variables also display significant differences between politically connected firms and their counterparts.

Table 4 displays the Pearson correlations between variables and shows no signs of multicollinearity. Further tests confirm the absence of multicollinearity, with an average VIF of 1.23 and the highest VIF score of 1.54 for the ROA variable. No variable has a VIF above 2.00.

**Table 4. Univariate statistics**

Variables	Mean				Median				Std. dev.			Obs		
	Whole	PolCon	Non-Con	sig	Whole	PolCon	Non-Con	sig	Whole	PolCon	Non-Con	Whole	PolCon	Non-Con
<i>CGIndex</i>	0.481	0.529	0.432	***	0.460	0.528	0.407	***	0.160	0.163	0.141	2,557	1,286	1,271
<i>OwnConcen</i>	0.709	0.692	0.725	***	0.732	0.707	0.750	***	0.181	0.179	0.182	2,555	1,286	1,269
<i>Size (billions Rp)</i>	9,992	16,100	3,894	***	2,759	6,096	1,233	***	23,100	30,500	8,229	2,557	1,286	1,271
<i>Size (ln)</i>	14.813	15.560	14.064	***	14.830	15.623	14.025	***	1.676	1.518	1.482	2,557	1,286	1,271
<i>FirmAge (year)</i>	34.472	36.163	32.775		32.000	31.000	33.000		19.748	23.852	14.319	2,556	1,286	1,270
<i>FirmAge (ln)</i>	3.412	3.424	3.399		3.466	3.434	3.497		0.495	0.540	0.445	2,557	1,286	1,271
<i>Leverage</i>	0.470	0.480	0.460	***	0.473	0.477	0.467	**	0.205	0.199	0.211	2,557	1,286	1,271
<i>ROA</i>	0.044	0.053	0.035	***	0.032	0.036	0.029	***	0.087	0.094	0.078	2,557	1,286	1,271
<i>MTB</i>	1.606	1.761	1.450	***	1.079	1.182	1.005	***	1.644	1.834	1.411	2,554	1,286	1,268
<i>Asym</i>	3.627	3.622	3.632		3.677	3.663	3.699		0.575	0.528	0.619	2,557	1,286	1,271
<i>DPR</i>	0.210	0.244	0.175	***	0.019	0.100	0.000	***	0.356	0.387	0.318	2,538	1,278	1,260

Notes: Table 4 presents the univariate statistics for all variables. T-test for mean values and Mann-Whitney Wilcoxon test for median values of PolCon and Non-Con are used in this table. Statistical significance is denoted by \*, \*\*, and \*\*\*, representing the 10%, 5%, and 1% levels respectively. The definitions of the variables used can be found in Table 3.

**Table 5. Pearson correlation Matrix**

	1	2	3	4	5	6	7	8	9	10
1 <i>CGIndex</i>	1.000									
2 <i>PolCon</i>	0.303***	1.000								
3 <i>OwnConcen</i>	-0.049**	-0.089***	1.000							
4 <i>Size</i>	0.592***	0.446***	-0.178***	1.000						
5 <i>FirmAge</i>	0.280***	0.025	0.105***	0.201***	1.000					
6 <i>Leverage</i>	0.048**	0.051***	-0.028	0.139***	-0.017	1.000				
7 <i>ROA</i>	0.158***	0.100***	0.091***	0.131***	0.166***	-0.259***	1.000			
8 <i>MTB</i>	0.118***	0.095***	0.043**	0.047**	0.061***	-0.066***	0.445***	1.000		
9 <i>Asym</i>	-0.163***	-0.009	0.062***	-0.080***	-0.074***	0.0200	-0.051***	-0.061***	1.000	
10 <i>DPR</i>	0.253***	0.097***	0.073***	0.205***	0.188***	-0.106***	0.350***	0.249***	-0.053***	1.000

Table 5 reports the correlation matrix between the variables used in the analysis. Statistical significance is denoted by \*, \*\*, and \*\*\*, representing the 10%, 5%, and 1% levels respectively. The definitions of the variables used can be found in Table 3.



## Endogeneity

A firm's political connection decision is influenced by factors that may also impact corporate governance quality and not random. Controlling shareholders of firms with higher corporate governance quality may appoint politically connected board members to show investors their intention to protect minority shareholder interests, or politically connected board members may only associate with reputable firms with good governance quality.

Therefore, our study may face endogeneity between the measures of political connectedness and the quality of corporate governance. To test the potential endogeneity of political connectedness we conduct the endogeneity test developed by Durbin-Wu Hausman test (Durbin, 1954, Wu, 1973, Hausman, 1978). The Durbin-Wu Hausman (DWH) test result (score 8,41, significant at the 1% level), indicate that the endogeneity issue between political connections and the corporate governance quality measure exists. Thus, results of the Heckman treatment effect procedure should be relied upon, as ordinary least square regression would yield bias results when there is endogeneity problem (Lennox et al., 2012). There are two common approaches to deal with endogeneity, propensity score matching (PSM) and instrumental variables for two-stage least square regression (2SLS). In this paper, we will use PSM and entropy balancing as the main regression, and 2SLS as robustness test.

To account for differences in observable factors related to corporate governance quality, we use a propensity-score matched (PSM). Propensity Score Matching (PSM) is a statistical method that is widely used in observational studies to estimate the causal effect of a treatment or exposure on an outcome of interest. The PSM approach is based on the idea of creating a virtual randomized control trial from an observational study by matching treated individuals with control individuals who have similar characteristics, or propensity scores, with respect to confounding variables. The PSM pair research design involves selecting a subset of the observational data that consists of matched pairs of treated and control individuals. This subset of data is then used to estimate the treatment effect. The advantage of the PSM pair research design is that it reduces the bias in the estimation of treatment effects by controlling for confounding variables, which makes it easier to establish a causal relationship between the treatment and the outcome, thereby mitigating misspecification issues. (Minutti Meza, 2013).<sup>1</sup>

Following Boubakri et al. (2012), we match politically connected firms to firms in the same industry and year using the nearest neighbor method. We use the reduction of caliper size and the exclusion of divergent matches to achieve covariate balance after calculating the propensity score (Austin, 2011). A successful covariate balance in PSM means that the treated and control groups are well-matched with respect to confounding variables. This is crucial because any imbalances in the confounding variables can introduce bias in the estimation of the treatment effect, leading to incorrect conclusions about the relationship between the treatment and the outcome.

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<sup>1</sup> To create a propensity-matched sample, we estimate a logit model for the propensity score. We then use multiple logit models to determine if a firm is politically connected (1) or not (0). Firms with similar connection probabilities, but without political links, are matched with politically connected firms. The result is pairs of firms with similar characteristics, but differing political connections, by pairing observations with the smallest differences in propensity scores (i.e., closest observed firm-level factors).



The results from the t-test indicates a success in achieving covariate balance among the confounding variables between the treated and control groups. No significant differences (at the 5% level) were found between the politically connected (treatment) and non-connected (control) groups. Finally, the impact of political connectedness on governance quality was analyzed by comparing governance quality between the treated and untreated groups.

Beside PSM, we also consider the Entropy Balancing estimation. Entropy balancing can be seen as a generalization of propensity score weighting approach (Hainmueller, 2012). The entropy balancing procedure is considered to have several advantages to the propensity score matching (PSM) technique, such as the elimination of “manual” iteration, matching and balancing process; maintain the whole sample for subsequent treatment effect and its compatibility with many standard estimators for subsequent analysis. Furthermore, in Entropy balancing, the weights are directly adjusted to the known sample moments in entropy balancing, eliminating the needs for iterations and balance checking (Hainmueller, 2012, Hainmueller and Xu, 2013).

### **Political connections and corporate governance quality**

Table 6 displays the regression results using both Propensity Score Matching (PSM) and Entropy Balancing methods. H1 predicts that political connections have a positive and significant effect on corporate governance quality. The results in Table 6 support this, with the coefficient of PolCon being positive and significant at the 1% level in both PSM and Entropy Balancing models. This supports the idea that politicians appointed as board members enhance corporate governance. The results are also meaningful, as a 1 standard deviation increase in political connections is linked to a 10.2% increase in corporate governance quality, on average.

In addition to political connections, most of the control variables have a significant relationship with corporate governance quality. This implies that there are various factors that affect a firm’s corporate governance quality, not just political connections. These results align with previous research which shows that larger and older firms typically have more public information available, leading to higher transparency levels (Siregar and Utama, 2008, Bhagat and Bolton, 2013, Adjaoud and Ben Amar, 2010), firms with higher dividend pay-out ratio are most likely to have better corporate governance quality (Mitton, 2004, Adjaoud and Ben Amar, 2010) and stronger minority shareholders position (Gugler and Yurtoglu, 2003), firms with lower level of information asymmetry have better corporate governance quality (Kanagaretnam et al., 2007, Cormier et al., 2010), and firms with better financial performance also tends to have better corporate governance quality (Bhagat and Bolton, 2008, Brown and Caylor, 2004).

**Table 6. Main Regression results**

Variables	PSM CG INDEX		ENTROPY CG INDEX	
	coefficient #1	t-values #2	coefficient #3	t-values #4
<i>PolCon</i>	0.0328***	( 4.36)	0.0328***	( 4.88)
<i>OwnConcen</i>	0.0006	( 0.03)	-0.0020	(-0.10)
<i>Size</i>	0.0435***	( 15.81)	0.0428***	( 19.07)
<i>FirmAge</i>	0.0331***	( 3.60)	0.0386***	( 5.51)
<i>Leverage</i>	-0.0123	(-0.64)	-0.0312**	(-1.98)
<i>ROA</i>	0.1106**	( 1.98)	0.1337***	( 3.00)
<i>MTB</i>	0.0004	( 0.13)	0.0025	( 0.96)
<i>Asym</i>	-0.0254***	(-4.08)	-0.0235***	(-4.39)
<i>DPR</i>	0.0422***	( 4.00)	0.0355***	( 4.38)
<i>constant</i>	-0.2704***	(-4.64)	-0.2943***	(-5.93)
<i>Year FE</i>	Yes		Yes	
<i>Industry FE</i>	Yes		Yes	
<i>Observations</i>	1,788		2,533	
<i>F</i>	62.66***		92.89***	
<i>R2</i>	0.116		0.462	

Table 6 presents the results of the regressions using the propensity score matching (PSM) in columns 1 & 2 and Entropy balancing methods in columns 3&4. *CG\_Index* is the measure for corporate governance quality. Statistical significance is denoted by \*, \*\*, and \*\*\*, representing the 10%, 5%, and 1% levels respectively. The definitions of the variables used can be found in Table 3.

Fixed-effect dummies for industry and year are included in all models to account for cross-sectional industry and time variations affecting the dependent variables, but results are omitted for brevity. The standard errors are robust (to address heteroscedasticity) and samples are clustered at the firm level (to account for non-independence) are used to calculate p-values in panel regressions (Petersen, 2009).

This study uses two-tailed significance levels. Previous research recommended at least 10 observations per industry-year for valid results (Choi et al., 2018, Chi et al., 2016). Our sample has a minimum of 13 observations per industry-year and only observations with complete data for the variables are used.

## Robustness tests

### *Alternative regression models – 2SLS*

Another one of the most common approaches to deal with endogeneity problem is treatment effect using instrumental variables (IV) in a two-stage least square regression (2SLS). The process requires the use of instrumental variables as exclusion restriction in the first stage of the two-stage regression process.<sup>2</sup> In studies of political connections and its effect on corporate governance quality, there are no specific instruments for measuring political connections.

However, in previous studies on political connections, various instruments have been utilized that do not directly relate to firm-level dependent variables. An example of this is the distance between a firm's headquarters and the capital city (Kim and Zhang, 2016), the regional unemployment rate (Xu et al., 2013) and the education level of board members (Xu et al., 2016, An et al., 2016).

After running Cragg-Donald Wald F statistic test for instrument relevance (weak/strong instruments) and Hansen J-test of instrument exogeneity, there are three instruments that satisfy both criteria of strong and exogenous instruments: the distance of corporate H.Q. from the capital (*HQDist*), regional unemployment rate (*Unempl*), and average education level of board of commissioners (*BEduc*). The estimation process starts with a probit regression of *PolCon*, the proxy for political connectedness using three instrumental variables that passed the endogeneity, relevance, and exogeneity tests (*HQDIST*, *Unempl*, and *BEduc*). In the second stage, the relationship between political connections and corporate governance quality is examined by incorporating the inverse mills ratio (IMR) estimation obtained from the first stage regression (Kim and Zhang, 2016).

Table 7 shows the results of the relationship between political connections and corporate governance quality, using the first and second-stage regression analysis. The analysis includes industry and year dummies, firm clustering, and uses robust standard errors. To address outliers, all variables are winsorized at the 1% and 99% levels, except for variables that fall between 0 and 1.

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2 Instrumental variables need to be strongly related to the endogenous variable they are serving as instruments for and independent of the disturbance term in the equation. Weak instruments can cause inconsistent results, while using endogenous instruments can lead to biased results. For a treatment effects model, the ideal instrument should explain a firm's connection decision, but not be linked to any internal conflicts of interest. (Referenced sources: Wooldridge, 2010, "Econometric Analysis of Cross Section and Panel Data" & Bound, Jaeger, & Baker, 1995, "Problems with Instrumental Variables Estimation").

**Table 7. Alternative Regression Method – 2SLS**

Variables	1st Stage Probit PC		2nd Stage OLS CG INDEX	
	coefficient #1	t-values #2	coefficient #3	t-values #4
<i>PolCon</i>			0.1526***	( 2.79)
<i>HQDist</i>	0.0452***	( 3.58)		
<i>Unempl</i>	1.2274**	( 1.96)		
<i>BOCEduc</i>	0.5357***	( 8.33)		
<i>OwnConcen</i>	0.0018	( 0.01)	0.0350	( 1.27)
<i>Size</i>	0.3965***	( 18.23)	0.0234***	( 2.88)
<i>FirmAge</i>	0.0729	( 1.12)	0.0346***	( 2.91)
<i>Leverage</i>	0.0082	( 0.06)	-0.0009	(-0.03)
<i>ROA</i>	-0.0537	(-0.12)	0.1458***	( 2.75)
<i>MTB</i>	0.0913***	( 4.75)	-0.0001	(-0.02)
<i>Asym</i>	0.0578	( 1.16)	-0.0264***	(-4.66)
<i>DPR</i>	-0.0225	(-0.26)	0.0405***	( 4.27)
<i>IMR</i>			-0.0789***	(-2.34)
<i>constant</i>	-8.1347***	(-17.69)	-0.0514	(-0.44)
<i>Year FE</i>	Yes		Yes	
<i>Industry FE</i>	Yes		Yes	
<i>Observations</i>	2,468		2,462	
<i>Wald Chi</i>	738.98***			
<i>F</i>			51.85***	
<i>R2</i>	0.239		0.524	

Table 7 presents the results of the Two-Stage Least Square regression (2SLS). The first stage probit regression between *PolCon* with three instruments (*HQDist*, *Unempl* and *BEduc*) and all the control variables used in the second stage are shown in columns 1 & 2. Column 3 and 4 shows the second stage regression with the addition of *IMR* from the first stage regression as additional control variable. *CG\_Index* is the measure for corporate governance quality. Statistical significance is denoted by \*, \*\*, and \*\*\*, representing the 10%, 5%, and 1% levels respectively. The definitions of the variables used can be found in Table 3.

Table 7 shows a positive and significant (at the 1% level) relationship between political connections and the corporate governance quality measure (*CG\_Index*). The results further support the hypothesis that politically connected firms have better corporate governance quality than non-connected firms.



### Sub-Index Regression

In this section, we conduct further additional tests by doing the regression for each sub-index of the corporate governance quality index, namely the board effectiveness index, risk management index, shareholders relationship index and stakeholders relationship index.

Table 8 presents the results of the sub-indexes regression. Except for shareholders relationship sub-index, all other corporate governance quality sub-indexes show positive and significant relationship between political connections and the corporate governance quality sub-indexes, all significant at the 1% level. Political connections are positively related with better board efficiency, better risk management and better stakeholders relationship sub-indexes score. The results are mainly consistent with the main regression results and further support our paper hypothesis.

However, there is no significant relationship between political connections and shareholders relationship sub-indexes. One potential explanation for this result is that the corporate governance items chosen in this research fail to adequately capture the shareholders relationship elements of the corporate governance. Another possible explanation is that the emphasis of the politically connected board are in the improvement of corporate governance quality of the firm as a whole, not only on shareholders needs, and if the emphasis contradict shareholders needs, politically connected board choose to uphold other aspects (board efficiency, risk management and stakeholders relationship) above the shareholders.``

**Table 8. Sub-Index Regression**

Variables	<i>Board Effectiveness</i>		<i>Risk Management</i>		<i>Shareholders Relations</i>		<i>Stakeholders Relations</i>	
	coefficient	t-values	coefficient	t-values	coefficient	t-values	coefficient	t-values
	#1	#2	#3	#4	#5	#6	#7	#8
<i>PC</i>	0.0276***	( 4.07)	0.0438***	( 3.88)	0.0004	( 0.07)	0.0613***	( 4.46)
<i>OwnConcen</i>	-0.0064	(-0.32)	-0.0033	(-0.11)	0.1339***	( 8.49)	-0.1317***	(-3.13)
<i>Size</i>	0.0288***	( 13.55)	0.0497***	( 13.30)	0.0245***	( 15.25)	0.0687***	( 13.19)
<i>FirmAge</i>	0.0294***	( 4.39)	0.0411***	( 3.43)	0.0135**	( 2.48)	0.0688***	( 4.56)
<i>Leverage</i>	-0.0194	(-1.16)	-0.0946***	(-3.58)	0.0241	( 1.71)	-0.0416	(-1.22)
<i>ROA</i>	-0.0338	(-0.70)	-0.0228	(-0.31)	0.3577***	( 8.63)	0.2468***	( 2.72)
<i>MTB</i>	0.0120***	( 5.63)	-0.0036	(-0.79)	0.0048**	( 2.19)	-0.0036	(-0.82)
<i>Asym</i>	-0.0020	(-0.34)	0.0021	( 0.23)	-0.0683***	(-13.32)	-0.0257**	(-2.26)
<i>DPR</i>	0.0085	( 0.95)	0.0651***	( 4.94)	0.0062	( 0.83)	0.0598***	( 3.78)
<i>constant</i>	-0.1947***	(-4.06)	-0.4960***	(-5.75)	0.3577***	( 9.21)	-0.8443***	(-7.56)
<i>Year FE</i>	Yes		Yes		Yes		Yes	
<i>Industry FE</i>	Yes		Yes		Yes		Yes	
<i>Observations</i>	2,536		2,542		2,541		2,542	
<i>F</i>	26.85***		93.46***		44.74***		73.44***	
<i>R2</i>	0.204		0.433		0.391		0.387	

Table 7 presents the results of the regressions using the Entropy balancing methods for the sub-indexes of the *CG\_Index*, namely the board effectiveness index, risk management index, shareholder relationship index and stakeholders relationship index. Statistical significance is denoted by \*, \*\*, and \*\*\*, representing the 10%, 5%, and 1% levels respectively. The definitions of the variables used can be found in Table 3.

### *Connected BOC and Connected BOD*

The two-tiered board corporate governance system in Indonesia separated the function of supervisory (non-executive) board and management (executive) board. In this section, we analyze the impact of connected supervisory board (*PCBOC*) and connected management board (*PCBOD*) on the quality of firm's governance. *PCBOC* (*PCBOD*) is a binary indicator, coded as 1 if the firm appointed a politically connected BOC (BOD), and 0 if it doesn't.

**Table 9. PCBOC & PCBOD**

Variables	CG INDEX		CG INDEX	
	coefficient #1	t-values #2	coefficient #3	t-values #4
<i>PCBOC</i>	0.0248***	( 4.98)		
<i>PCBOD</i>			-0.0158	(-1.36)
<i>OwnConcen</i>	0.0467***	( 3.59)	0.0491***	( 3.75)
<i>Size</i>	0.0419***	( 25.54)	0.045***	( 29.42)
<i>FirmAge</i>	0.0391***	( 7.68)	0.0408***	( 7.94)
<i>Leverage</i>	-0.0042	(-0.36)	-0.0051	(-0.43)
<i>ROA</i>	0.1445***	( 4.31)	0.1413***	( 4.20)
<i>MTB</i>	0.0035**	( 2.16)	0.0043***	( 2.62)
<i>Asym</i>	-0.0244***	(-5.99)	-0.0239***	(-5.82)
<i>DPR</i>	0.038***	( 5.46)	0.0374***	( 5.35)
<i>constant</i>	-0.3008***	(-8.53)	-0.3474***	(-10.13)
<i>Year FE</i>	Yes		Yes	
<i>Industry FE</i>	Yes		Yes	
<i>Observations</i>	2,533		2,533	
<i>F</i>	0.5161***		0.5117***	
<i>R2</i>	0.112		0.112	

Table 9 presents the results of the regressions using *PCBOC* as the independent variable in columns 1 & 2 and *PCBOD* as the independent variable in columns 3&4. *CG\_Index* is the measure for corporate governance quality. Statistical significance is denoted by \*, \*\*, and \*\*\*, representing the 10%, 5%, and 1% levels respectively. The definitions of the variables used can be found in Table 3.

The results in Table 9 indicates that only the appointment of politically connected board of commissioners (*PCBOC*) that have significant relationship with corporate governance quality and no significant relationship between politically connected board of directors (*PCBOD*) and corporate governance quality. The result is aligned with Bona-Sanchez et al. (2014) findings that the appointment of former politicians as independent non-executive board members increase transparency and protection of minority shareholders interests.

## SUMMARY AND CONCLUSIONS

Political connections can have a significant impact on corporate governance quality, as they provide companies with access to key decision-makers, government resources, and a more favorable regulatory environment. These connections can serve as a source of influence, enabling companies to shape the rules and regulations that govern their industries. By working closely with politicians and regulators, companies can secure favorable policies, such as tax breaks or regulatory exemptions, that can improve their bottom line and overall competitiveness (Hou et al., 2017; Ling et al., 2016).

The paper provides new insight to the current literature on political connections by studying the influence and impact of political connections on corporate governance quality in a developing country like Indonesia, where ownership concentration is high and legal and investor protection systems are weak. Using a broad definition of political connections and rigorously tested corporate governance quality indices, the results demonstrate that political connectedness can significantly enhance corporate governance quality.

Political connections can help companies build and maintain their reputation, as they can demonstrate their commitment to responsible and ethical business practices. Companies that are closely aligned with political leaders and have a good reputation for following the rules and regulations of the industry are more likely to be trusted by investors, consumers, and other stakeholders. This, in turn, can lead to improved brand recognition, higher levels of customer loyalty, and increased profitability. Politicians and shareholders provide accountability and transparency to the market for the purpose of maximizing the firm's wealth, as well as enhancing their own reputation and standing in the community (Andres et al., 2022).

Finally, political connections can also play a key role in ensuring the accountability of corporate leadership. Companies that have political connections are more likely to have board members and senior executives who are committed to upholding high standards of governance, ethics, and compliance. By working closely with regulators and politicians, these companies can ensure that their governance practices are transparent and in line with the latest industry standards, helping to protect both their reputation and the interests of stakeholders.

The results from this paper provides several impacts for the literature on the possible governance role of political connections in firms. Unlike a plethora of previous studies that focuses on the opportunistic rent-seeking behavior of politically connected firms (agency theory), we are focusing on the accountable behavior of politically connected firms (stewardship theory). Our results suggest that political connections could be a positive force for firm's good governance, providing better accountability and transparency in the market. These findings provide a new perspective of the effects of having political connections on firm's governance and suggest that the potential benefits should be taken into consideration.

Second, our results highlight the importance of taking into consideration the function of political connections in emerging markets, where the investor protection systems and legal enforcement are often weaker. Our findings suggest that even in these markets, political connections can



play an important role in improving corporate governance quality, providing a better investment environment for the market.

Finally, the findings of the paper indicates that the design of regulatory frameworks and policies should consider the potential positive effects of political connections, rather than simply focusing on potential drawbacks. The results indicate that promoting political connections that are accountable and transparent can be beneficial for increasing the quality of corporate governance and the investment environment.

Given that the agency theory and stewardship theory stands on two different and contrasting sides which makes the value of political connections become theoretically ambiguous, the discovery that political connections are linked to higher corporate governance quality is significant for future research, as most prior studies have primarily examined the negative impact political connections had on corporate governance. This paper presents a new opportunity for research to broaden its perspective and explore the value of political connectedness through either a stewardship theory lens or by considering both agency and stewardship theories in analyzing political connectedness..

Our findings suggest that political connectedness can have positive effects on governance quality, which is in contrast to the dominant view in previous studies that political connections are negative for governance. This study opens up the possibility for new research to further explore the value of political connections in a more nuanced way, taking into account both the stewardship and agency theories, rather than just focusing on the negative relationship. This could help to provide a more comprehensive understanding of political connectedness topic.

This study expanding the limited studies available on the accountable behavior of politically connected firms, like those highlighted by Bona-Sanchez et al. (2014, 2019) and (Pascual Fuster and Crespí Cladera (2018) – all using the Spanish setting –, to a developing country in other part of the world such as Indonesia in South-East Asia. Our results indicate that corporate governance can become the universal language and universal tool to improve corporate management and accountability of firms across the world.

This study's results are relevant to regulators seeking to advance good corporate governance and enhance investor protection. Specifically, the findings suggest that regulators should limit the involvement of current politicians with businesses, mandate disclosure of political affiliations, and evaluate the suitability of former politicians as non-executive, independent board members. The results also offer insight to investors and financial analysts, emphasizing the significance of considering a country's institutional framework and political connections when making investment decisions.

However, the author also acknowledge several limitation of this study. First, the items collected for the corporate governance index is not balanced for each sub-indices. This is due to the fact that all the data required for the corporate governance index (30 items per firm per year) have to be manually collected from each firm annual report for each period, and the availability of data varies from each sub-index. Second, there is a non-significant impact of political connections

towards shareholders relationship index, which will need further exploration. The potential issues will need to be addressed by a future research, whether by changing the shareholders relationship corporate governance item or finding other reasons behind this result. Third, the additional tests shows different impact between politically connected BOC and politically connected BOD on corporate governance quality which needs to be explored further in future studies. Finally, while the treatment effect model used address the selection bias for observables, the author cannot rule out the possibility of unobserved variables (omitted variables) bias that may have an effect of the results.

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### Appendix 1. List of Corporate Governance Items for Quality Index

NO	Items	Assumed impact on Corporate Governance	Justification
<b>A</b>	<b>Board Effectiveness</b>		
1	The presence of Major shareholders in BOC (Yes/ No)	Yes=negative impact	The presence of major shareholders can influence the supervising function
2	The presence of Major shareholders in BOD (Yes/ No)	Yes=negative effect	The presence of major shareholders can influence the management decision making
3	Are the CEO Independent? (Yes/No)	Yes=positive effect	Management leadership is independent from majority shareholders interest
4	Percentage of Independent Commissioners on the BOC	Higher value=positive effect	Higher percentage of independent commissioner represents greater independence and objectivity of the board
5	Percentage of female members on BOC	Higher value=positive effect	More diverse members improved board decision-making due to more diverse perspectives
6	Percentage of female members on BOD	Higher value=positive effect	More diverse members improved board decision-making due to more diverse perspectives
7	Percentage of foreign members on BOC	Higher value=positive effect	More diverse members improved board decision-making due to more diverse perspectives
8	Percentage of foreign members on BOD	Higher value=positive effect	More diverse members improved board decision-making due to more diverse perspectives
9	Fewer than 8 or more than 15 board members (Yes/ No)	Yes=negative effect	Optimal range, outside of this range, sub-optimal board decision making due to either excessively narrow or unwieldy board size
10	Number of BOC meetings held	Higher value=positive effect	Higher numbers represents higher level of board diligence and commitment
11	Number of BOD meetings held	Higher value=positive effect	Higher numbers represents higher level of board diligence and commitment
12	Percentage of BOC meeting attendance	Higher value=positive effect	Higher numbers represents higher level of board diligence and commitment
13	Percentage of BOD meeting attendance	Higher value=positive effect	Higher numbers represents higher level of board diligence and commitment
14	Average BOC members tenure	Higher value=negative effect	Longer tenure could indicate lack of board independence and/or the entrenchment of long serving commissioners
15	Average BOD members tenure	Higher value=negative effect	Longer tenure could indicate lack of board independence and/or the entrenchment of long serving directors

NO	Items	Effect on Corporate Governance	Explanation
<b>B</b>	<b>Risk Management</b>		
16	Disclosure of Risk Management System (Yes/No)	Yes=positive effect	Better disclosure is an indicator for company preparation level to manage risk
17	Disclosure of Risk Management Evaluation (Yes/No)	Yes=positive effect	Better disclosure is an indicator for company preparation level to manage risk
18	Disclosure of Risk Management Types (Yes/No)	Yes=positive effect	Better disclosure is an indicator for company preparation level to manage risk
19	Disclosure of Risk Management Implementation (Yes/No)	Yes=positive effect	Better disclosure is an indicator for company preparation level to manage risk
20	Disclosure of Internal Control system (Yes/No)	Yes=positive effect	Better disclosure is an indicator for proper internal control monitoring process
21	Alignment between Internal Control system with COSO (Yes/No)	Yes=positive effect	Better disclosure is an indicator for proper internal control monitoring process
22	Disclosure of Internal Control Evaluation (Yes/No)	Yes=positive effect	Better disclosure is an indicator for proper internal control monitoring process
<b>C</b>	<b>Shareholder Relation</b>		
23	Return on Equity index	Higher value=positive effect	Higher return indicates that the board are committed to shareholders interest
24	Disclosures on last year AGSM decisions, realisations and reasons for unrealised AGSM decisions	Higher value =positive effect	Indicator of transparency and provides an oversight power for the minority shareholders toward firms management and commitment to honour AGSM results
25	Disclosures on the identity of the ultimate shareholders	Yes=positive effect	Indicator of transparency
26	Disclosures on the availability of public access toward firms information (annual report, financial report, shareholders composition, etc)	Yes=positive effect	Indicator of transparency and provides accountability for public in general and minority shareholders in particular

D	Stakeholder Relation		
27	Disclosure of Environmentally related CSR (Yes/No)	Yes=positive effect	Better disclosure indicates a commitment to environment
28	Disclosure of Workers safety, health and development related CSR (Yes/No)	Yes=positive effect	Better disclosure indicates a commitment to employee
29	Disclosure of Social, Product & Consumers related CSR (Yes/No)	Yes=positive effect	Better disclosure indicates a commitment to society & consumers
30	Disclosure of Whistleblowing system and protection system for whistle-blowers	Higher value=positive effect	Better disclosure indicates a commitment to good corporate governance of company

Source: Modified from Institute of Directors 2017 Corporate Governance Index (Institute of Directors, 2017)

We use the Institute of Director Corporate Governance Index measurement to calculate an overall score for each company to make our data easily comparable. For “Yes/No” indicators, a score of 1 is given for “Yes” if it’s considered positive for governance (e.g. disclosing auditor fee) and 0 for “No”. If a “Yes” value is considered negative (e.g. board size with fewer than 8 or more than 15 directors), the score is 0 for “Yes” and 1 for “No”. For continuous indicators (e.g. Return on Equity), we use minimum-maximum normalization. The company with the highest value is given a score of 1, the lowest 0, and others are calculated using:  $(\text{Value}-\text{Minimum})/(\text{Maximum}-\text{Minimum})$ .

For indicators with higher values seen as negative for governance (e.g. share price volatility), we follow the same calculation method but subtract the score from 1. If data is missing for a company, they receive the average score. We then average the standardized indicator scores for each of the 4 (four) governance categories to get a score for each company in our sample.

### Appendix 2. Construct Validity tests - Cronbach's alpha

		CG Index
A. All governance elements	Cronbach's $\alpha$	0.7418
	Mean r	0.0874
	No.of elements	30
B. All sub-indices	Cronbach's $\alpha$	0.6454
	Mean r	0.3128
	No.of elements	4
C. Board effectiveness sub-indices	Cronbach's $\alpha$	0.3820
	Mean r	0.0400
	No.of elements	15
D. Risk Management sub-indices	Cronbach's $\alpha$	0.7315
	Mean r	0.2802
	No.of elements	7
E. Shareholders relationship sub-indices	Cronbach's $\alpha$	0.2316
	Mean r	0.0701
	No.of elements	4
F. Stakeholders relationship sub-indices	Cronbach's $\alpha$	0.8592
	Mean r	0.6041
	No.of elements	4

This table shows Cronbach's  $\alpha$  (top row), mean correlation (r) between elements (middle row), and number of elements (third row) for corporate governance quality measures (CG\_Index) elements, indices, and elements within sub-indices.

### Appendix 3. Construct Validity tests - Principal Component Analysis (PCA)

#### Panel A. Sub-index components

	Eigenvalue	Explained variance	Board effectiveness	Risk management	Shareholders relations	Stakeholders relations
<i>CG_Index</i>						
Component 1	1.9427	48.57%	0.3122	<b>0.5967</b>	0.3968	<b>0.6237</b>

#### Panel B. Individual element components CG index

Variable	Comp1	Comp2	Comp3	Comp4	Comp5
Eigenvalue	5.9136	2.5476	1.8087	1.6585	1.5112
Explained variance	20.39%	8.78%	6.24%	5.72%	5.21%
<i>Board Effectiveness</i>					
b_eff1	0.0893	<b>0.4929</b>	0.0463	0.2900	0.1536
b_eff2	0.1246	<b>0.9281</b>	-0.0303	0.0656	0.0379
b_eff3	0.0835	<b>0.9241</b>	-0.0273	0.0624	0.0173
b_eff7	-0.0654	0.0883	-0.0227	<b>0.8372</b>	-0.1285
b_eff8	-0.1091	0.1324	0.0306	<b>0.8238</b>	-0.1202
b_eff10	0.1533	0.0090	0.1638	-0.2104	<b>0.7602</b>
b_eff11	0.2717	0.1219	0.1175	-0.1234	<b>0.7563</b>
b_eff12	0.1676	-0.0080	<b>0.9161</b>	-0.0038	0.0591
b_eff13	0.1331	-0.0406	<b>0.9198</b>	0.0014	0.0902
<i>Risk Management</i>					
risk1	<b>0.7638</b>	0.0739	0.0794	-0.1172	0.1108
risk2	<b>0.7980</b>	0.1055	0.0976	-0.1107	0.0073
risk5	<b>0.6367</b>	-0.0971	0.2968	0.0371	-0.0288
risk6	<b>0.5881</b>	0.1146	0.0468	0.0591	0.1732
risk7	<b>0.8121</b>	0.0679	0.1059	-0.0945	0.0102
<i>Stakeholders Relationship</i>					
env_csr	<b>0.6660</b>	0.0672	0.0578	0.0737	0.1812
work_csr	<b>0.6417</b>	0.1044	0.1151	0.0888	0.1472
stake_csr	<b>0.7143</b>	0.0443	0.1319	0.0720	0.2411
wblow_csr	<b>0.7249</b>	0.1615	0.0659	-0.0870	0.1506

Panel A: Loadings of each sub-index for the components retained in PCA (eigenvalue>1) for *CG\_Index*. Panel B: the loadings of each governance element for the five components of *CG\_Index* with the highest eigenvalues. We report only the elements with loading above 0.4 in at least one of the five main components. Number of sub-index elements in parenthesis. All panels: We use varimax rotation. Loadings above 0.4 are in boldface. Elements are described in Appendix 1.