

# The Impact of Corporate Governance Quality on Principal-Agent and Principal-Principal Conflict in Indonesia

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## ABSTRACT

This study analyzes the effect of corporate governance (CG) quality on principal-agent (PA) and principal-principal (PP) conflict in Indonesia while also controlling for potential endogeneity through the use of two-stage least squares (2SLS) regression. The results for PA conflict (measured by operating expense ratio and asset utilization ratio) are consistent with the notion that better CG quality leads to a lower level of PA conflict. Furthermore, the result for PP conflict is also consistent with the notion that higher corporate governance quality led to lower level of PP conflict. A higher CG quality is positively related to a higher dividend payout ratio and lower level of wedge (difference between cash flow and control right), which indicates a lower PP conflict level. Moreover, further robustness tests showed that most aspects of CG have similar effects on PA and PP conflict. Better board efficiency, internal control management, board remuneration system and stakeholders related CSR has a significant effect on reducing PA and PP conflict. Interestingly, we find no significant relationship between shareholders' relation and all PA and PP conflict measures.

**Keywords:** Corporate Governance Quality; Agency Conflict; Endogeneity; Two-Stage Least Squares.

## INTRODUCTION

There are two potential conflicts of interest inside a firm: the principal-agent (PA) conflict, which refers to the conflict between shareholders and managers [27],[41] and the principal-principal (PP) conflict, which refers to the conflicts between two classes of principals—the majority and minority shareholders [41]. These conflicts usually happen as a result of different priorities from both parties. This study will discuss both conflicts from the agency theory perspective. Based on agency theory, both managers and shareholders are utility maximizers, which lead to opportunistic behavior and could potentially create a conflict of interest between agent and principal, as well as between principal and principal.

[7] provided a study that measures agency costs for firms under different ownership and management structures. They found that when the principal is also serving as the agent of the firm, both interests are closely aligned. However, if an outsider manages the firm, both interests are not always aligned. Furthermore, the principal cannot always ensure that the agent will act in the principal's best interests. On the other hand, the PP conflict in many cases occurred when the majority or controlling shareholders expropriate minority

shareholders, which means that the majority shareholders only represent their interest and might privilege themselves over minority shareholders interest's [40].

The PA conflict is commonly found in firms that is characterized by separation of ownership and control between the principal and agent [29]. This separation will simply form when the principal hires an agent and delegates a degree of control along with the right to make decisions to the agent. Thus, the level of potential PA conflict is usually higher among public listed firms, especially those with disperse ownership concentration. Besides the PA conflict, publicly listed firms also face higher level of potential PP conflict, especially in developing countries like Indonesia where the level of ownership concentrations are high, and the presence of large/dominant controlling shareholders are common [41].

Previous studies highlighted the essential role of corporate governance (CG) in various aspects of a firm, including potential PA and PP conflict. A large volume of published studies discusses the impact of CG implementation on various variables such as firm performance [4], [32], [46]; earnings management [1]; dividend policy [2],[37]; related-party transactions [20],[23]; ownership structure [15], [47]; and CSR disclosure or reporting [3].

However, regarding the relationship between CG quality and PA conflict, the results have been inconsistent. In one side, [9], [28], [32], and [46] find that higher level of CG quality leads to higher level of profitability, greater firm efficiency, and better firm performance, which indicates lower level of PA conflict among firms with better CG quality. On the other side, [4], and [16] find no significant relationship between CG quality and firm performance. With regards to the relationship between CG quality and PP conflict, the results are consistent. Previous studies found that better CG mechanisms reduce PP conflict which is measured by various proxies, such as related-party transactions [20], [23], summation of Herfindahl Index [23], dividend payout ratio [2], [31], [37], and wedge between control and cash flow rights [47].

Although corporate governance comprises of various different aspects, most of the existing studies focused on the relationship between a certain aspect of CG quality (i.e., board characteristics, internal control, CSR, etc.) or an individual CG quality variable (board gender diversity, board independence, board salary, etc.), and only a handful of studies use a broad CG index as a proxy for CG quality. Besides, academic literature regarding the relationship between CG quality and agency conflict, especially in Indonesia, has lagged behind. Therefore, this research aims to investigate the impact of CG quality on PA and PP conflict using a broader CG index as a proxy for CG quality in Indonesia with the intention of extending current knowledge.

This study contributes to the literature development on CG in the following ways. First, most of the research on corporate governance mainly focuses on single variable or a single aspect for corporate governance proxy (i.e. proportion of independent board members, audit committee characteristic, board remunerations, etc.), this research use a very robust corporate governance quality index [33], comprises of 38 items from five different aspects of corporate governance (board efficiency, audit and risk management, board remuneration, shareholders relationship and stakeholders relationship).

Secondly, our research extends previous literature by investigating each sub-index components of corporate governance index (CGI) to both PA and PP conflict. Other than that, this research could be used by academics as a reference for future studies. Regulators could also use this study to review or refine regulations about CG, especially in handling agency conflict and expropriation practice.

### Principal – Agent Conflict

Agency theory as developed by [29] purported that stakeholder of a firm, whether it be their

managers or their shareholders, behave opportunistically. This behavior leads to a conflict of interest between a company's managers (agent) and shareholders (principal), i.e., PA conflict, due to both sides wanting to maximize their utility [29]. The responsibility of managers, or agents, is to make decisions that will maximize shareholders' or principals' wealth. However, it may not be in line with the managers' goal of maximizing their personal benefits. This conflict will cause agency costs to appear as there are inefficiencies, dissatisfactions, and disruptions inside the firm.

According to [41], agency costs are higher when an outsider manages the firm and increases with the number of non-manager shareholders. The study also shows that agency costs are inversely related to the manager shareholder's ownership. Results are consistent with the interest of each party. As for firms with an owner with complete control of the firm, which also serves as a manager, the interests of the manager and owner are completely aligned. However, for firms where the owner employs outsiders as managers, the interests of the owner and manager are completely unaligned. We follow [41] in measuring the principal agent conflict using operating expense-to-sales ratio and the reciprocal asset utilization ratio to maintain consistent directionality with our first measure.

### Principal – Principal Conflict

Besides the PA conflict, more recent literature also discussed the potential of another type of conflict, the PP conflict [41],[43]. The PP conflict occurs between majority and minority shareholders, especially when the majority (controlling) and minority shareholders have different goals and interests related to the firm. In emerging countries, including Indonesia, PP conflict is more common because firms tend to have higher levels of concentrated ownership and weak investor protection systems for minority shareholders [41],[47].

Furthermore, controlling shareholders in emerging countries are often related to family control and business groups that exploit their positions, which arises the expropriation of minority shareholders [41]. Expropriation activities can take many forms, such as placing family members and cronies as key management personnel, which enabled them to expropriate through related-party transactions [19], paying lower dividends [35], and acquiring control rights that are greater than cash flow rights through pyramiding [19],[35], [45].

This study will focus on the expropriation that is associated with lower levels of dividend and pyramid schemes. [34] constructed "the outcome" agency model of dividends, which view dividends as

an outcome of the minority shareholders' legal protection, thus reducing the desire of majority shareholders from using too much of earnings available to benefit themselves (expropriation activities). The pyramid scheme, primarily through tunneling, means transferring resources from a lower-level firm to a higher-level firm which allows the controlling shareholder of the highest-level firm (parent company) to gain the economic benefit at the expense of minority shareholders of the lower-level firm [23],[35]. In other words, there is an indication of expropriating minority shareholders.

Furthermore, tunneling could be problematic when the ultimate shareholder control rights are much larger than the cash flow rights [35], [45]. [19] also provided a study that stated that companies with a low cash flow to control rights ratio would pay low dividends since the controlling shareholder will seek control of corporate resources. Therefore, this study will use the dividend payout ratio and the wedge between cash flow and control rights as proxies for the PP conflict.

### **Corporate Governance and Principal-agent Conflict**

[17] has proven that governance structures are formed in response to agency conflicts in firms. In other words, firms with higher levels of agency conflicts have better governance structures in place, specifically more independent boards and audit committees, and better audit quality. Besides, previous studies [10],[11],[9],[14],[13],[26],[32], [38],[48] also implicates significant association between CG quality and its components (i.e., independent commissioner and board size) with firm performance.

This is because an effective CG practice means effective monitoring of the management, which will protect the firm from conflict of interest. This then results in reduced agency costs, thus improving firm performance. Similarly, past studies [1], [22], found that components of CG (i.e., board and audit committee) significantly affect earnings management. This is due to better internal monitoring in an effective CG, which means agents are ensured to carry out policies that maximize shareholders' wealth, hence reducing earnings management. Comparably, previous studies [6] have proven that the implementation of GCG reduces agency cost.

### **Corporate Governance and Principal-Principal Conflict**

Expropriation activities that characterized PP conflict could be done by paying lower dividend payout and pyramid schemes. [23] found evidence that CG mechanisms with more independent audit

committees and separate dual leadership could reduce the expropriation of minority shareholders. [20] investigated the relationship between CG and PP conflict in Indonesia, which provided an empirical result that CG could lead to minimal PP conflict. In addition, [37] found that firms with stronger CG have higher-level dividend payouts, hence reducing expropriation activities as higher dividend payouts limit the controlling shareholder in controlling the corporate's wealth [19].

Expropriation of minority shareholders through pyramiding occurred when controlling shareholder gains control rights in excess of the cash flow rights by owning lower-level firms indirectly through another corporation [19]. Greater control rights than cash flow rights induce ultimate shareholders to control the corporate's assets for their own benefit at the expense of minority shareholders [42], [47]. Utama et al. (2017) investigated the relations between CG practice and ownership structure related to cash flow and control rights, which found that CG practice has a negative impact on cash flow leverage, i.e., the wedge between control and cash flow rights. This result indicates that firms with better CG practices enable controlling and minority shareholders to align their interests.

### **Corporate Governance Index Construct Validity**

Various models have been used to measure corporate governance quality in the literature, either using specific corporate governance characteristics or using broad corporate governance index. However, each approach had its own shortcomings. Investigation using an individual characteristic of governance mechanism ignores the effect of other governance characteristics that may influence the used character or that the analyzed characteristic is actually a proxy of other governance characteristics. Meanwhile, the main issue with the corporate governance index is whether the governance index used as proxy really actually related to the underlying concept of corporate governance it claims to measure [33].

To ensure that both the corporate governance index used in this study are valid measures of corporate governance quality, we use Cronbach's alpha ( $\alpha$ ) and principal component analysis (PCA). Higher Cronbach's  $\alpha$  scores indicate that the elements of a multipart governance measure correlate with each other and thus creating a coherent underlying concept of governance. Principal component analysis (PCA) is a statistical procedure that uses an orthogonal transformation to convert a set of observations of possibly correlated variables into a set of values of linearly uncorrelated variables

called principal components. Balance and high loading values of PCA indicate that the elements of the index managed to collectively capture a coherent underlying concept of governance [49].

The Cronbach's  $\alpha$  values are reasonably strong for the corporate governance index with the score of 0.79. Moreover, mean inter-element correlations are quite low, 0.09 for range from 0.05, indicating that the strong  $\alpha$  scores are driven by a substantial number of elements (38 items) rather than high inter-element correlations. The combinations of high Cronbach's  $\alpha$  values and low average correlation between the elements suggest that the elements used in this study managed to capture different aspects of corporate governance.

We conduct PCA for sub-indexes and individual elements of the CG index. The sub-indexes analysis shows a relatively balance and high loading values for most of the sub-indexes. This result suggest that the sub-indexes managed to collectively capture a coherent underlying concept of governance with the cumulative value of the retain factors amount to 55%.

For the individual elements, we analyze seven components with the highest eigenvalues. All of the strongest principal components loaded on a single category of sub-indexes, further suggesting the coherence of the sub-indexes. The seven main components also together load on four out of five of the sub-indexes for each index, supporting the need for a broad overall corporate governance quality index. These seven components explain 43 percent of the variance for corporate governance index.

The result from PCA analysis also confirmed the Cronbach's  $\alpha$  suggestion that a broad set of corporate governance aspects are required to capture overall corporate governance quality. As such, the Cronbach's  $\alpha$  and PCA analysis assessment supported the construct validity of our corporate governance index measures.

### Endogeneity of Corporate Governance

Prior studies [2],[15],[17], and [43] highlighted the possible endogeneity between CG and agency problems (PA and PP conflict) and that endogenous relationships are observed between several agency cost proxies and specific individual governance attributes. Moreover, [17] states that governance structures emerge due to agency conflicts in a firm.

As for PP conflict, wedge between control and cash flow rights was proven to be detrimental to the quality of the CG system by [15]. These findings demonstrate that controlling shareholders may be interested in obtaining private gains. As a result, implementing an effective set of CG standards is not a top priority for them.

In addition, [43] investigate whether the severity of the PP conflict (measured by several proxies, including the largest shareholder's voting shares, dividend payout ratio, and cash flow voting rights) influences the quality of CG. Results showed that when PP conflict is more severe, the positive relationship between good CG and firm value is more substantial, and that good CG can mitigate the negative effect of PP conflict on firm value. [2] have also proven that dividend payout positively affects board composition, implying that Ghanaian firms are more likely to establish good CG to ensure protection of shareholders' interest. Therefore, we could infer that there might be an endogeneity problem between PA and PP conflict with CG quality and as [6] states that this problem should be controlled as it could affect the result.

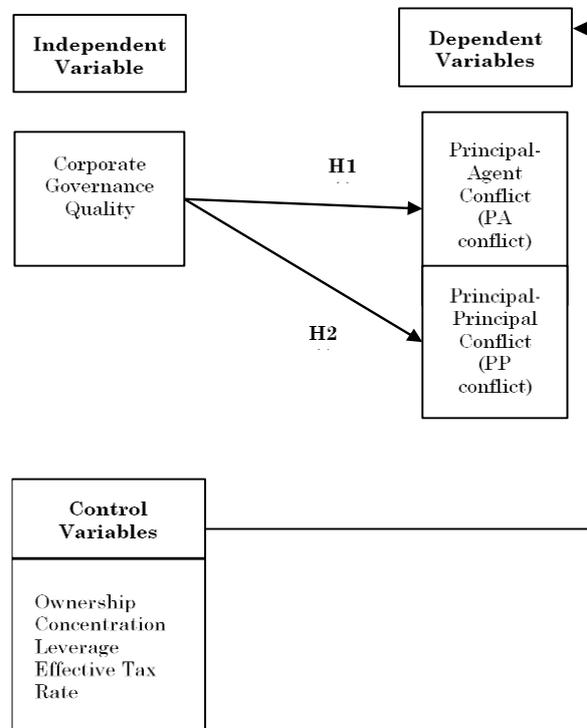


Figure 1. Conceptual Framework

### Hypotheses Development

Previous research found evidence regarding the relationship between corporate governance and PA conflict. [17] provided results showing that firms with higher PA conflict levels tend to have better CG quality. Moreover, many studies have found significant association between CG quality and firm performance [9],[32], [38], and [48]. In addition, several studies have revealed that components of CG (i.e., board and audit committee) negatively affect earnings management [1], increase financial reporting quality [10] and have more trust from creditors with regards to loan collateral [11].

The reason behind this is that an effective CG practice means effective monitoring of the management, which means agents are ensured to carry out policies that maximize shareholders' wealth and protect the firm from conflict of interest. This then results in reduced agency costs, thus improving firm performance and reducing earnings management. From the literature above, we could establish a link between CG and agency costs arising from the conflict of interest. A good and effective CG could mitigate conflict of interests in a firm and reduce agency costs through better monitoring. Based on this link, we predict that firms with better CG quality could lessen the conflict of interest between principals and agents.

H1: Corporate governance quality is negatively related to principal-agent conflict.

On the other hand, past studies have also shown that CG quality does affect PP conflict. [20] show that CG reduces the expropriation of minority shareholders. [23] proved that more independent audit committee and separate dual leadership could reduce the expropriation of minority shareholders. Utama et al. (2017) found that CG practice positively influences cash flow rights, reducing PP conflict. These results suggest that CG practice aims to lessen PP conflict, reducing the conflict of interests between controlling and non-controlling shareholders.

As expropriation activities, including lower dividend payouts and pyramiding, are forms of PP conflict, better CG practice also minimizes those activities. This is proven by [37] that found positive relations between CG and dividend payouts. Also, [45] and [47] proved that CG practice has a negative impact on the wedge between control and cash flow rights. Therefore, we expect that firms with better CG quality will reduce PP conflict, leading to the second hypothesis.

H2: Corporate governance quality is negatively related to principal-principal conflict.

## RESEARCH METHOD

### Sample Selection and Data Collection

Using purposive sampling, the data collection started by taking all firms listed on IDX in 2015. Then, we dropped firms based on the following criteria: (i) Firms belonging to the financial sector as they have different accounting mechanisms. (ii) Firms with incomplete or missing data for dependent, independent, or control variables. (iii) Firms whose fiscal year does not end on December 31. After all the adjustments, the targeted sample

comprised 1,780 firm-year observations representing 356 unique firms.

However, the process of hand-collecting the CGI data for each company manually was time-consuming. Thus, out of 1,780 firm-year observations or 356 firms, only 830 firm-year observations or 166 firms (46.63%) were successfully collected. Nevertheless, 830 firm-year observations represent 86.00% of the total market capitalization of all non-financial firms in 2015 and 64.25% of the total market capitalization of all listed firms in IDX as of 2015. Financial data is gathered from the Capital IQ (Compustat) database, with missing financial data supplemented from the firm's annual reports.

### Variable's Operationalization

Appendix A shows a complete summary of variables used in this study. We follow [41] to measure PA conflict using expense ratio (OPX) and asset utilization ratio (UTL), whereas proxies for PP conflict are dividend payout ratio (DIV) as suggested by [31] and the difference between control and cash flow rights (wedges/WED), which are suggested by [45]. Independent variable used to measure CG quality is Corporate Governance Index (CGI), a modification of the IoD Good Governance Index (GGI) to the Indonesian settings by [33].

The IoD index is used because it represents various and thorough aspects of corporate governance, ranging from board effectiveness, audit and risk management, board remuneration, shareholders relationship and stakeholders relationship. The index will be calculated with equal weights (CGI). Ownership concentration (OWN), leverage (LEV), and effective tax rate (ETR) are also included in this study as control variables. As for 2SLS regression, industry-median corporate governance index (MED) [5] and firm age (AGE) [28] are used as instrumental variables in the estimation.

### Research Model

The following are research models that will be used to investigate the relationship between CG quality and PA conflict:

$$OPX_{it} = \beta_0 + \beta_1 CGI_{it} + \beta_2 OWN_{it} + \beta_3 LEV_{it} + \beta_4 ETR_{it} + \sum YEAR_{it} + \sum INDUSTRY_{it} + \varepsilon_{it} \quad (1)$$

$$UTL_{it} = \beta_0 + \beta_1 CGI_{it} + \beta_2 OWN_{it} + \beta_3 LEV_{it} + \beta_4 ETR_{it} + \sum YEAR_{it} + \sum INDUSTRY_{it} + \varepsilon_{it} \quad (2)$$

While to investigate the relationship between CG quality and PP conflict, the following research models are used in this study:

$$DIV_{it} = \beta_0 + \beta_1 CGI_{it} + \beta_2 OWN_{it} + \beta_3 LEV_{it} + \beta_4 ETR_{it} + \sum YEAR_{it} + \sum INDUSTRY_{it} + \varepsilon_{it} \quad (3)$$

$$WED_{it} = \beta_0 + \beta_1 CGI_{it} + \beta_2 OWN_{it} + \beta_3 LEV_{it} + \beta_4 ETR_{it} + \sum YEAR_{it} + \sum INDUSTRY_{it} + \varepsilon_{it} \quad (4)$$

where:

OPX = expense ratio (operating expense – to – sales)

UTL = asset utilization ratio (total sales – to – total asset)

DIV = dividend payout ratio (dividends paid – to – net income)

WED = wedge between control and cash flow rights

CGI = corporate governance index (equal weights)

OWN = ownership concentration using (Herfindahl Concentration Index)

LEV = leverage (total debt – to – total equity)

ETR = effective tax rate (tax expense – to – EBT)

YEAR = year fixed-effect

INDUSTRY = industry fixed-effect

## Analysis Method

This research implemented four analysis method. First, descriptive statistics, quartile and industry analysis are used to summarize, and describe the data. Next, classical assumption tests (normality, multicollinearity, heteroscedasticity, and autocorrelation test) are carried out to fulfill the requirements of the linear regression model so that the research model can be considered valid. Following that is endogeneity test to address the possible endogeneity, then instrumental variables validity test. Finally, hypothesis testing consists of F-test (effect of independent variable simultaneously) and t-test (effect of each independent variable), are carried out to see whether the results from the analyzed data are in accordance with the hypotheses that have been made.

## RESULTS AND DISCUSSION

### Descriptive Statistics

The mean value of the operating expense ratio (OPX) is 23.49%, is comparable to [46], which has a mean value of 25%. The mean value of asset utilization ratio (UTL) is 72.07%, which is comparable with [8], where the mean value is 82.04%. The mean value of the dividend payout ratio (DIV) is 20.72%, which is comparable with [18], where the mean value is 13.4%. Meanwhile, the mean value of the difference between cash flow and control rights (WED) is 8.13% which is comparable with [47], where the mean value is 7%.

**Table 1.** Descriptive Statistics

Var	N	Mean	Median	Std. Dev.	Min.	Max.
OPX	826	0.235	0.163	0.284	0.018	2.159
UTL	830	0.721	0.550	0.681	0.002	4.164
DIV	830	0.207	0.000	0.322	0.000	1.767
WED	830	0.081	0.000	0.169	0.000	0.710
CGI	830	0.665	0.681	0.116	0.316	0.882
OWN	830	0.333	0.287	0.206	0.009	0.980
LEV	830	0.709	0.425	0.980	0.000	6.399
ETR	830	0.215	0.247	0.274	0.000	1.074

Note: See appendix A for the definition of the variables. Data are sourced from authors' calculation.

To further understand the data, we group CGI data into four quartiles and did a quartile analysis. The average CGI value of all sample companies during the last five years is 0.66, indicating that the CGI quality of most Indonesian companies is mediocre. Result also shows that as CGI increases through the quartile, OPX decreases, while UTL, DIV, and WED increase. In addition, we found that the average WED values in Q3 and Q4 are the same. This might show an insignificant relationship between CGI and WED since no significant changes occurred. Furthermore, we calculated the average value of dependent and independent variables and classified them into their industry.

Result suggests the top three industries with the highest CGI value are (i) Mining, (ii) Property, Real Estate and Building Construction, and (iii) Basic Industry and Chemicals, whereas the bottom three industries with the lowest CGI value are (i) Consumer Goods Industry, (ii) Trade, Services & Investment, and (iii) Miscellaneous Industry. Regardless, the CGI value for all industries is between 0.63-0.70, a small range of numbers. This demonstrates that industry classifications have no impact on the companies' CGI quality in a given industry. This is most likely because the government's CG regulations apply to all industries and have no industry-specific regulations.

Result also shows several other findings. First, with an operating expense ratio of 0.61, the Mining industry has the highest operating expense ratio, whereas the Basic Industry and Chemicals has the lowest operating expense ratio of 0.11. Next, both Basic Industry and Chemicals and Trade, Services & Investment have the highest asset utilization ratio of 1.06. In contrast, the Property, Real Estate and Building Construction has the lowest asset utilization ratio of 0.29. As for the third independent variable, the Miscellaneous industry has the highest dividend payout ratio of 0.59, whereas the Mining industry has the lowest dividend payout ratio of 0.13. Last, with a wedge between cash flow and control rights of 0.16, the Miscellaneous industry has the highest wedge value, while the lowest value of wedge belongs to the Mining industry.

## Regression

Variables are winsorized at 1% and 99% percentile to replace the extreme values of the dataset. Multicollinearity test indicates no presence of multicollinearity as all value of variance inflation factor (VIF) are approximately 1. Next, to investigate the distribution of residuals, we conduct the Breusch-Pagan test. From the data collected, it is apparent that model 2 in Eq. (2) is the only model that has homoscedastic characteristic as the value of Prob > chi2 is larger than 0.05. As for the other 3 models, the results suggest that there is a heteroscedasticity problem and must be treated with *robust* command to obtain robust standard error.

Furthermore, in autocorrelation test, results show that there are 3 models with Prob > F value below 0.05. This implies that model 1 in Eq. (1), model 2 in Eq. (2), and model 4 in Eq. (4) has autocorrelation in the error terms. Clustering with cluster command will be used to solve this problem, as it will generate consistent standard error estimates.

## Endogeneity Test

The Durbin-Wu-Hausman test results show that the p-value in Eqs. (1), (2), (3) and (4) is significant. The null hypothesis for the endogeneity test statistic is that the specified endogenous regressors are exogenous. This indicates that the null hypothesis is rejected, i.e., CGI is proven to be endogenous in Eqs. (1), (2), and (3) and (4). Hence, we will use the 2SLS method for Eqs. (1), (2), (3) and (4).

## Instrumental Variables Validity Test

[30] stated that two conditions must be satisfied for the instrumental variable(s) or IV to be valid. First, the instrument(s) must be relevant, i.e., strongly correlated with the specified endogenous variable. Second, the instrument(s) must be exogenous, i.e., not correlated with the error term and the dependent variables. To satisfy the first condition, weak identification test must be performed.

For weak identification test, Cragg-Donald Wald F statistic is employed. If the instrument(s) is weak, then the estimators might perform poorly. The instrument(s) is considered strong if the F statistic is above the Stock-Yogo critical value or a minimum value of 10 [36]. Based on the results, the Cragg-Donald Wald F statistic for all equations are above the 10% critical values. In addition, the F statistic for all models is above 10. Therefore, we reject that our instruments are weak, i.e., our instruments are relevant.

The second condition, exogenous instrument(s) requires an overidentification test using Hansen J statistic. Result shows that all equations' p-value is not significant. Hence the null hypothesis that our instruments are exogenous cannot be rejected. This indicates that the second condition is satisfied. In summary, our instruments are proven valid, i.e., relevant to CGI and exogenous to all of our dependent variables. This indicates that the impact on OPX, UTL, and DIV can only be explained through CGI to resolve the endogeneity problem.

## Hypotheses Testing

The results in Table 2 for the 1<sup>st</sup> and 2<sup>nd</sup> model show that the regression model for Eq. (1) and Eq. (2) as a whole could explain the relationship between CG quality and PA conflict based on the significant Prob>F value. Based on the result from the 1<sup>st</sup> model, an increase by 1 point CGI will result in a decrease by 1.32% in OPX, since Table 2 shows that the coefficient for CGI is -1.322 with a p-value of 0.000, significant at the 1% level. This indicates that CGI has a strong negative and significant relationship with OPX.

**Table 2.** PA Conflict Regression Result

	1st Model OPX		2nd Model UTL		
	Coeff.	P> z	Coeff.	P> z	
Obs.(N)	826		830		
F	7.21		9.08		
Prob>F	0.000		0.000		
CGI	-1.322	0.000 ***	6.658	0.000 ***	***
OWN	0.116	0.012 **	-0.051	0.756	
LEV	-0.020	0.014 **	0.009	0.772	
ETR	-0.067	0.052 *	-0.298	0.055 *	*
Cons	0.916	0.000 ***	-3.098	0.000 ***	***
Year FE	Yes		Yes		
Industry FE	Yes		Yes		
Robust	Yes		Yes		
Std.Err					
Cluster	Yes		Yes		

Note: Superscripts \*\*\*, \*\*, \* indicate statistical significance at 1%, 5%, and 10%, respectively. See appendix A for the definition of the variables. Data are sourced from the authors' calculations.

The second model is using the utilization ratio, which is the inverse and reciprocal ratio of OPX. The results from Table 2 for 2<sup>nd</sup> model indicated that an increase by 1 point in CGI will increase UTL by 6.66% since, the coefficient for CGI is 6.658 with p-value significant at the 1% level, which indicates that there is a strong positive and significant relationship between CGI and UTL. In conclusion, the regression results for Eqs. (1) and (2) show that there is a significant negative relationship between CG quality and PA conflict.

These results support the hypothesis 1 of this research that higher level of corporate governance quality can help to mitigate PA conflict.

The following 2SLS regression results in Table 3 for the CG quality and PP conflict model uses DIV and WED as the proxies for PP conflict. The results in Table 3 for the 3<sup>rd</sup> model shows that when CGI increases by 1 point, DIV will increase by 2.52%. The result is significant at the 1% level. Regarding the 4<sup>th</sup> model, the regression also shows significant and negative relationship between CGI and WED, thus indicating that CGI also have significant influence in reducing the difference between cash flow and control right. The result in Table 3 for the 4<sup>th</sup> model indicate that when CGI increase by 1 point, WED will decrease by 0,96%. The result is also significant at the 1% level.

These results also support the hypothesis 2 of this research that higher level of corporate governance quality can help firms to reduce PP conflict.

**Table 3.** PP Conflict Regression Result

	3rd Model			4th Model		
	DIV			WED		
Obs.(N)	830			830		
F	6.79			3.78		
Prob>F	0.000			0.000		
	<b>Coeff.</b>	<b>P&gt; z </b>		<b>Coeff.</b>	<b>P&gt; z </b>	
CGI	2.519	0.000	***	-0.958	0.006	***
OWN	0.094	0.143		0.279	0.000	***
LEV	-0.016	0.397		-0.017	0.001	***
ETR	-0.048	0.357		0.058	0.083	*
Cons	-1.259	0.000	***	0.581	0.003	***
Year FE	Yes			Yes		
Industry FE	Yes			Yes		
Robust	Yes			Yes		
Std.Err	Yes			Yes		
Cluster	Yes			Yes		

Note: Superscripts \*\*\*, \*\*, \* indicate statistical significance at 1%, 5%, and 10%, respectively. See appendix A for the definition of the variables. Data are sourced from authors' calculation.

## Results discussion

### *Corporate Governance Quality and Principal-agent Conflict*

This study found a significant and negative correlation between CG quality and PA conflict, which is consistent with the first hypothesis of this study. As agency theory states, both managers and shareholders are expected to behave opportunistically and maximize their utility [29], resulting in agency costs. However, results have proven that if a firm has a good CG quality, PA conflict or conflict of interest between the principal and agent decreases. Both proxies for PA conflict, which are operating expense ratio and asset utilization ratio, are proven to be correlated with CGI. This implies that when

the CG quality increases, the firm's operating expense ratio decreases, while the firm's asset utilization ratio increases. A possible explanation for this relationship is that when CG quality is better, the firm effectively monitors the board [10], hence reducing the agency costs induced by separation of ownership and control.

According to [7], the operating expense ratio measures how effectively the firm's management controls operating costs. As [29] pointed out, managers would increase their non-monetary compensation to achieve utility maximization without taking government supervision and other restrictions into consideration. This is certainly not in the best interests of the principals because it does not benefit them and does not increase their wealth. Thus, we can infer that a higher expense-to-sales ratio is associated with less efficiency and higher agency costs. However, as this study's findings show, agency costs incurred by managers seeking to improve their non-monetary pay can be lowered by excellent CG practices. Effective board oversight by shareholders could manage the opportunistic behavior of managers [44], therefore controlling the firm's expense ratio.

The asset utilization ratio has also been proven to increase as the CG quality of a firm increases. Unlike the operating expense ratio, the sales-to-asset ratio is inversely correlated to agency costs. It seems possible that these results are due to the monitoring function of boards [25]. [29] see the primary function of boards as monitoring the actions of agents to protect the interests of principals. Therefore, this monitoring function can serve as a possible explanation for the significant negative correlation between CG quality and PA conflict.

For the first model in Eq. (1), all the control variables are significantly correlated with OPX, whereas for model 2 in Eq. (2), only one of the control variables (ETR) significantly correlate with UTL. Results show that OWN is positively correlated with OPX, significant at the 5% level. This suggests that if the firm has a more concentrated ownership structure, agency costs of the firm rise. This finding corroborates the ideas of [12] and [24], who suggested that firms with concentrated ownership may abuse their power to achieve their private benefit, hence an increase in agency costs.

The following controlling variable, LEV, has a negative correlation with OPX, also significant at the 5% level. This result implies that a firm with higher financial leverage has lower agency costs. This result is consistent with previous studies (i.e. [1], [31]) that consider leverage to be a mitigating agency mechanism, as outsiders monitor the actions of managers.

Finally, results show that ETR is negatively correlated with OPX and positively correlated with UTL, both results significant at the 10% level. The correlation between ETR and OPX/UTL indicates that a higher effective tax rate will result in lower agency costs. This result is consistent with past literature [39] which argue that agency cost decreases as a more effective monitoring of the agents are implemented, thus a higher effective tax rate is paid as managers will not focus solely on profit maximization.

### ***Corporate Governance Quality and Principal-Principal Conflict***

Based on the hypothesis testing result, CG quality causes negative and significant effects on PP conflict. The hypothesis is supported when either DIV or WED is used as the proxy for PP conflict. This indicates that better CG quality will result in higher-level dividend payouts, which agrees with [2] and [37] findings. Paying lower dividends is one of the expropriation activities that characterized the PP conflict.

[47] suggest that the solution for protecting minority shareholders from the opportunistic behavior of the majority or controlling shareholders is by implementing a good CG structure, and the outcome of their protection is receiving dividends [34]. In other words, firms with better CG quality will ensure fair treatment for all shareholders, hence having higher-level dividend payouts as an outcome of the minority shareholders' legal protection.

Similarly, when WED is used as the proxy, the result found a strong negative and significant correlation between CGI and WED, significant at the 1% level, which also support our second hypothesis. The result is corroborating the finding of [47], which found that firms with better CG practices could reduce the desire of the controlling shareholders to exploit their control rights at the expense of minority shareholders by pyramidal structure, thus aligning the interest between both parties.

For the third model in Eq. (3), all the control variables are insignificantly correlated with DIV, whereas for model 4 in Eq. (4), all of the control variables are significantly correlate with WED.

Table 3 model 4 result also show a positive and significant relationship between OWN and WED. Firms with higher level of ownership concentration tends to have higher level of disparity between cash flow right and control right. This result is aligned with previous studies finding that firms with higher level of ownership concentration may abuse their controlling power to achieve their personal benefit through having large WED, expropriating the minority shareholders interest [15],[47].

Furthermore, the results in Table 3 model 4 shows a negative and significant relationship between LEV and WED. This result indicate that leverage can also function as a monitoring process for major shareholders, with higher level of leverage increase debt covenant requirement and reduces major shareholders' power. This finding is consistent with previous studies, which found that higher leverage ratio or debt may be used as a mechanism to mitigate the potential of expropriation from major shareholders [21].

### ***Sub-indexes Components Analysis***

To further analyze the correlation between CG quality with PA and PP conflict, we regress each CGI sub-index component (BE: Board Effectiveness, AR: Audit & Risk, BR: Board Remuneration, SHR: Shareholder Relation, and STR: Stakeholder Relation) to our dependent variables. The results are shown in Table 4-7.

Regarding PA conflict, most of the sub-indexes results are consistent with the overall CGI regression, which shows a negative connection with OPX but a positive effect on UTL. Following that, the result for DIV and WED shows that BE index, AR index, BR index, and STR index significantly increase dividend payouts and significantly reduce wedge. This is consistent with the notion that better CGI led to lower PP conflict, further validating the main regression results.

Interestingly, for all models, the regression results for the shareholders relationship sub-index shows no significant relationship with PA and PP conflicts measures. One possible answer that the four elements used to capture shareholders relationship related corporate governance measures fail to represents the true shareholders relationship corporate governance elements among Indonesian firms. Further research which replaces these elements are require to corroborate this assumption.

## **CONCLUSION**

### **Conclusion**

This paper studies the impact of CG quality on agency conflicts of Indonesian firms. Using a sample of 166 non-financial firms listed in IDX from 2015-2019, we found a negative and significant relationship between CG quality and PA conflict. The current findings add substantially to our understanding of the monitoring role of boards [25] to protect the interests of principals [29]. The second finding was that CG quality has a negative and significant impact on PP conflict when the dividend payout ratio is used as the proxy. This result is

consistent with previous studies [2], [37] and suggests that firms with better CG mechanisms result in higher-level dividend payouts, hence reducing the opportunistic behavior of the controlling shareholders [19], [34]. Moreover, when a wedge between control and cash flow rights is used as a PP conflict proxy, our finding also support the second hypothesis that better corporate governance quality reduce the potential expropriation of minority shareholders interest from major shareholders [47].

**Research Limitations and Further Research Avenue**

The researcher acknowledges that there are limitations to this research paper. The exhaustive manual hand-collection data gathering process limits the number of firms that are tested in this paper. Should more publicly available information regarding the ultimate ownership and ownership structure for all of the publicly listed firms in

**Table 4.** PA Conflict (OPX) – Sub Index Regression Result

		1st Model									
		OPX									
Obs.(N)	826		826		826		826		826		
F	3.96		5.59		3.75		6.16		7.74		
Prob>F	0.000		0.000		0.000		0.000		0.000		
	Coeff.	P> z									
BE	-1.895	0.001 ***									
AR			-1.767	0.000 **							
BR					-1.393	0.002 **					
SHR							3.407	0.202			
STR									-0.512	0.000 ***	
OWN	0.227	0.006 ***	0.059	0.248	0.15	0.022 **	-0.009	0.916	0.079	0.064 *	
LEF	-0.019	0.058 *	-0.024	0.019 **	-0.008	0.498	-0.002	0.907	-0.022	0.008 ***	
ETR	-0.116	0.008 ***	-0.08	0.055 *	-0.004	0.953	-0.178	0.000 ***	-0.077	0.019 **	
Cons	1.019	0.000 ***	1.288	0.000 ***	1.085	0.000 ***	-1.915	0.246	0.410	0.000 ***	
Year FE	Yes										
Industry FE	Yes										
Robust Std.Err	Yes										
Cluster	Yes										

Note: Superscripts \*\*\*, \*\*, \* indicate statistical significance at 1%, 5%, and 10%, respectively. See appendix A for the definition of the variables. Data are sourced from authors’ calculation.

**Table 5.** PA Conflict (UTL) – Sub Index Regression Result

		2nd Model									
		UTL									
Obs.(N)	830		830		830		830		830		
F	4.11		5.75		3.06		10.26		9.16		
Prob>F	0		0		0.0001		0		0		
	Coeff.	P> z	Coeff.	P> z	Coeff.	P> z	Coeff.	P> z	Coeff.	P> z	
BE	9.46	0.000 ***									
AR			8.727	0.000***							
BR					7.02	0.001 *					
STR							12.175	0.175			
SHR									2.58	0.000 ***	
OWN	-0.652	0.030 **	0.232	0.253	-0.179	0.508	0.431	0.123	0.135	0.415	
LEF	0.003	0.953	0.025	0.541	-0.055	0.269	-0.060	0.240	0.018	0.571	
ETR	-0.034	0.845	-0.223	0.241	-0.633	0.043 **	0.227	0.111	-0.246	0.105	
Cons	-3.565	0.001 ***	-4.866	0.000***	-3.957	0.004***	8.099	0.142	-0.55	0.038 **	
Year FE	Yes		Yes		Yes		Yes		Yes		
Industry FE	Yes		Yes		Yes		Yes		Yes		
Robust Std.Err	Yes		Yes		Yes		Yes		Yes		
Cluster	Yes		Yes		Yes		Yes		Yes		

Note: Superscripts \*\*\*, \*\*, \* indicate statistical significance at 1%, 5%, and 10%, respectively. See appendix A for the definition of the variables. Data are sourced from authors’ calculation.

**Table 6.** PP Conflict (DIV) – Sub Index Regression Result

3rd Model										
DIV										
Obs.(N)	830		830		830		830		830	
F	3.69		4.01		2.61		2.52		6.69	
Prob>F	0		0		0.0007		0.0011		0	
	Coeff.	P> z	Coeff.	P> z	Coeff.	P> z	Coeff.	P> z	Coeff.	P> z
BE	3.603	0.000***								
AR			3.344	0.000***						
BR					2.659	0.001***				
SHR							-6.939	0.193		
STR									0.976	0.000***
OWN	-0.136	0.282	0.201	0.018**	0.045	0.649	0.329	0.052*	0.164	0.010***
LEF	-0.019	0.389	-0.01	0.677	-0.041	0.152	-0.052	0.135	-0.013	0.479
ETR	0.051	0.431	-0.021	0.747	-0.175	0.126	0.172	0.012**	-0.028	0.582
Cons	-1.447	0.000***	-1.955	0.000***	-1.587	0.003***	4.412	0.179	-0.295	0.002***
Year FE	Yes		Yes		Yes		Yes		Yes	
Industry FE	Yes		Yes		Yes		Yes		Yes	
Robust Std.Err	Yes		Yes		Yes		Yes		Yes	
Cluster	Yes		Yes		Yes		Yes		Yes	

Note: Superscripts \*\*\*, \*\*, \* indicate statistical significance at 1%, 5%, and 10%, respectively. See appendix A for the definition of the variables. Data are sourced from authors' calculation.

**Table 7.** PP Conflict (WED) – Sub Index Regression Result

4th Model										
WED										
Obs.(N)	830		830		830		830		830	
F	3.36		3.29		2.81		2.84		3.49	
Prob>F	0.000		0.000		0.000		0.000		0.000	
	Coeff.	P> z	Coeff.	P> z	Coeff.	P> z	Coeff.	P> z	Coeff.	P> z
BE	-1.375	0.007***								
AR			-1.28	0.006***						
BR					-1.012	0.024**				
SHR							3.095	0.233		
STR									-0.371	0.010***
OWN	0.367	0.000***	0.238	0.000***	0.298	0.000***	0.179	0.024**	0.252	0.000***
LEF	-0.016	0.009***	-0.019	0.003***	-0.007	0.385	-0.001	0.951	-0.018	0.002***
ETR	0.020	0.519	0.048	0.150	0.107	0.072*	-0.03	0.389	0.051	0.126
Cons	0.654	0.003***	0.851	0.004***	0.706	0.016***	-1.856	0.245	0.214	0.003***
Year FE	Yes		Yes		Yes		Yes		Yes	
Industry FE	Yes		Yes		Yes		Yes		Yes	
Robust Std.Err	Yes		Yes		Yes		Yes		Yes	
Cluster	Yes		Yes		Yes		Yes		Yes	

Note: Superscripts \*\*\*, \*\*, \* indicate statistical significance at 1%, 5%, and 10%, respectively. See appendix A for the definition of the variables. Data are sourced from authors' calculation.

Indonesia exist, further research may incorporate that information to test the effect of CG quality on wedge.

Moreover, the four items use as elements of shareholders relationship index may need to be replace or updated with other shareholders relationship corporate governance since this is the only sub-index with no significant relationship with all measures of PA and PP conflicts. Future research can supplement, update or replace the current

shareholders relationship corporate governance elements with other elements that may provides better results.

### Implications

The findings of our study have important implications for researchers, regulators, investors and firms management. For researchers, our research adds to the existing literature on the CG

quality and agency problem relationship, particularly by addressing the possible issue of endogeneity highlighted by previous studies.

For regulators, the study provides further evidence that better corporate governance quality could help mitigate PA and PP conflict, increasing investor protection and providing more assurance for investors. Thus, it shows that efforts need to be made to further strengthen CG related policies in Indonesian firms.

For investors, our research shows that firms with better corporate governance quality will be able to provide more protection for investors, mitigating the potential abuse of resources from managers (PA conflict) and from major shareholders (PP conflict).

Lastly, for managers of the firms, our research result shows that implementing good corporate governance quality does bring benefits. Better board efficiency, internal control management, systematic and transparent remuneration system, along with good corporate social responsibility activities and disclosure will lead to lower level of operating expense ratio and increase level of asset utilization ratio, thus increasing managers performance and reducing conflicts between managers and shareholders.

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## Appendix

### Appendix A. Variables Operationalization

	Name	Measurement	Formula
OPX	Expense ratio	Operating expense-to-total sales	$OPX = \frac{\text{Operating Expense}}{\text{Total Sales}}$
UTL	Asset utilization ratio	Total sales-to-total asset	$UTL = \frac{\text{Total Sales}}{\text{Total Assets}}$
DIV	Dividend payout ratio	Dividends paid-to-net income	$DIV = \frac{\text{Dividends Paid}}{\text{Net Income}}$
WED	Wedge between control and cash flow rights	Control rights minus cash flow rights	$WED = \text{Control Rights} - \text{Cash Flow Rights}$
CGI	Corporate governance index	Modified IoD Good Governance Index	Indicator score of 38 CG items summed with equal weight
OWN	Ownership concentration	Herfindahl Concentration Index	$OWN = \% \text{ Top 1 Shareholding}^2 + \% \text{ Top 2 Shareholding}^2 + \% \text{ Top 3 Shareholding}^2 + \% \text{ Top 4 Shareholding}^2 + \% \text{ Top 5 Shareholding}^2$
LEV	Leverage	Total debt-to-total equity	$LEV = \frac{\text{Total Debt}}{\text{Total Equity}}$
ETR	Effective tax rate	Tax expense-to-EBIT	$ETR = \frac{\text{Tax Expense}}{\text{EBT}}$
MED	Industry-median corporate governance index	Median CGI value of each industry	$MED = \frac{(\text{number of obs.} + 1)}{2}$
AGE	Firm age	Number of years since established	$AGE = \text{year of observation} - \text{year of establishment} + 1$

## Appendix B. Corporate Governance Index Items

No	Items	Assumed Impact on Corporate Governance	Justification
<b>A Board Effectiveness</b>			
1	Major shareholders in BOC (Yes/No)	Yes=negative impact	Major shareholders can influence the supervising function
2	Major shareholders in BOD (Yes/No)	Yes=negative impact	Major shareholders can influence the management decision making
3	Independent CEO (Yes/No)	Yes=positive impact	Board Leadership is independent from majority shareholders interest
4	% of independent commissioners on the BOC	Higher value=positive impact	Greater independence and objectivity of the board
5	% of female members on BOC	Higher value=positive impact	Improved board decision-making due to more diverse perspectives
6	% of female members on BOD	Higher value=positive impact	Improved board decision-making due to more diverse perspectives
7	% of foreign members on BOC	Higher value=positive impact	Improved board decision-making due to more diverse perspectives
8	% of foreign members on BOD	Higher value=positive impact	Improved board decision-making due to more diverse perspectives
9	Fewer than 8 or more than 15 board members (Yes/No)	Yes=negative impact	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 impact	Higher level of board diligence and commitment
11	Number of BOD meetings held	Higher value=positive impact	Higher level of board diligence and commitment
12	% of BOC meeting attendance	Higher value=positive impact	Higher level of board diligence and commitment
13	% of BOD meeting attendance	Higher value=positive impact	Higher level of board diligence and commitment
14	Average BOC members tenure	Higher value=negative impact	High values could indicate lack of board independence and/or the entrenchment of long serving commissioners
15	Average BOD members tenure	Higher value=negative impact	High values could indicate lack of board independence and/or the entrenchment of long serving directors
<b>B Audit &amp; Risk</b>			
16	Auditor fee disclosure (Yes/No)	Yes=positive impact	Indicative of higher level of transparency and audit role
17	Size of audit committee	Higher value=positive impact	Indicative of a higher level of audit committee expertise
18	Number of audit committee meeting	Higher value=positive impact	Higher level of audit committee diligence and commitment
19	% of AC meeting attendance	Higher value=positive impact	Higher level of audit committee diligence and commitment
20	Risk management system disclosure (Yes/No)	Yes=positive impact	Indicator for company preparation level to manage risk
21	Risk management evaluation disclosure (Yes/No)	Yes=positive impact	Indicator for company preparation level to manage risk
22	Risk management types disclosure (Yes/No)	Yes=positive impact	Indicator for company preparation level to manage risk
23	Risk management implementation disclosure (Yes/No)	Yes=positive impact	Indicator for company preparation level to manage risk
24	Internal control system disclosure (Yes/No)	Yes=positive impact	Indicator for proper internal control monitoring process
25	Internal control alignment with COSO (Yes/No)	Yes=positive impact	Indicator for proper internal control monitoring process
26	Internal control evaluation disclosure (Yes/No)	Yes=positive impact	Indicator for proper internal control monitoring process
<b>C Board Remuneration</b>			
27	Average board salary/compensation	Higher value=negative impact	Could be suggestive of a lack of robust oversight over board compensation
28	Remuneration policy disclosure (Yes/No)	Higher value=positive impact	Indicator of transparency on remuneration system
29	Remuneration committee disclosure (Yes/No)	Yes=positive impact	Indicator of transparency on remuneration committee process
30	Board assessment policy disclosure (Yes/No)	Higher value=positive impact	Indicative of a link between board compensation and firm performance
<b>D Shareholder Relation</b>			
31	Return on equity	Higher value=positive impact	The board are committed to shareholders interest
32	Share price volatility over last 5 years period	Higher value=negative impact	Could indicate shareholders concerns with the governance of the company
33	Does the company have a policy to apply the one-share, one vote-principle	Yes=positive impact	Greater power enjoyed by minority shareholders
34	No dual class unequal voting rights - common shares (Yes/No)	Yes=positive impact	Greater power enjoyed by minority shareholders
<b>E Stakeholder Relation</b>			
35	Environmentally related CSR disclosure (yes/No)	Higher value=positive impact	A commitment to environment
36	Worker's safety, health and development related CSR disclosure (yes/No)	Higher value=positive impact	A commitment to employee
37	Social, product & consumers related CSR disclosure (yes/No)	Higher value=positive impact	A commitment to society & consumers
38	Whistleblowing system and protection system for whistleblower disclosure	Higher value=positive impact	A commitment to good corporate governance of company