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Firm Corporate Governance: Firm Performance and Ownership Causality Test

Abstract

Ownership structure, among other things, is one mechanism in corporate governance. In this context, ownership has a monitoring function. Another corporate governance mechanism is the market for corporate control. If managers did not act in the best interest of shareholder, then firm performance will decrease. The decreasing of firm performance will be followed by the changing in ownership. This will raise an interesting question, whether ownership caused by firm performance or vice versa. The objectives of this study to test whether monitoring function or market for corporate control that was implement as a corporate governance mechanism in Indonesia using causality model. A panel Granger-causality test base on Ganger (1969) applied to test the causality. Samples in this study were manufacture listed companies in Indonesia Stock Exchange during 2012-2016. Ownership concentration was proxy by the Herfindahl Index of Domestic Institution ownership. The firm performance indicators in this study were efficiency, measured by Operating cost to Sales ratio, and Sales to Asset ratio and Tobin’s Q. The results of the study showed that there was a bi-causality relationship between ownership concentration and both firm performance indicators. These suggested that the monitoring function and the market for corporate control were implemented as a corporate governance mechanism in Indonesia.

Keywords: Causality; Corporate Governance; Firm Performance; Ownership Structure

JEL Classification: G32, G34, G23


Abstrak

Kinerja perusahaan adalah pasar untuk mengendalikan perusahaan. Jika manajer tidak bertindak untuk kepentingan terbaik pemegang saham, maka kinerja perusahaan akan menurun. Penurunan kinerja perusahaan akan diikuti oleh perubahan kepemilikan. Hal ini menimbulkan pertanyaan yang menarik, apakah kepemilikan disebabkan oleh kinerja perusahaan atau sebaliknya. Tujuan dari penelitian ini adalah untuk menguji hubungan bi-causality antara kinerja perusahaan dan kepemilikan. Sampel dalam penelitian ini adalah perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia selama tahun 2012-2016. Konsentrasi kepemilikan diprosukan oleh Herfindahl Indeks Kepemilikan Domestik. Indikator kinerja perusahaan adalah pasar untuk menguji kausalitas. Samples in this study were manufacture listed companies in Indonesia Stock Exchange during 2012-2016. Ownership concentration was proxy by the Herfindahl Index of Domestic Institution ownership. The firm performance indicators in this study were efficiency, measured by Operating cost to Sales ratio, and Sales to Asset ratio and Tobin’s Q. Hasil penelitian menunjukkan bahwa terdapat hubungan bi-causality antara konsentrasi kepemilikan dan ke-7.

Kata Kunci: Causality; Tata Kelola; Kinerja Perusahaan; Struktur Kepemilikan

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Corporate governance issues arise because of the separation between ownership and control (Berle & Means, 1934). Ownership represents the owner/shareholder while control conducted by managers. Since managers involve in the day to day operation of the company, then they have more information than the owners (asymmetric information). They may engage in self-serving behavior. That is, they make decisions that will benefit them at the expense of the owner. Corporate governance then needed to align the interest of owner and managers. The key elements of corporate governance are a concern with the enhancement of corporate performance via the supervision, or monitoring, of management performance and ensuring the accountability of management to shareholders and another stakeholder base on the regulatory framework (Keasey & Wright, 1997).

One of the corporate governance mechanisms that can be used to align managers’ and owners’ interest is ownership concentration (Denis, Denis, & Sarin, 1999; Demsetz & Lehn, 1985). This concentration may serve to limit managerial discretion or to align managers’ and owners’ interest. By concentrating ownership, shareholders have the incentive to monitor managers, so they act in the best interest of shareholder. Empirical studies support this argument Cabeza-Gracia & Gómez-Ansón (2011) and Villegas-Guerrero et al. (2018). Cabeza-Gracia & Gómez-Ansón (2011) found that after controlling for endogeneity (the method of privatization, the type of industry, the company’s size and its level of risk), ownership concentrated in the hands of private investors have a positive and significant effect on post-privatization efficiency. Villegas-Guerrero et al. (2018) analyzed to what extent the impact that different levels of ownership concentration have on performance could be affected by the roles performed by board members. The results of their study showed that the monitoring provided by the board positively influences the effect that ownership concentration has on performance.

Majority ownership has high incentives and monitoring capabilities because majority owners can control the Board of Directors (Gedajlovic & Shapiro, 1998). Ownership structure, then, among other things, is one mechanism in corporate governance. In this context, ownership has a monitoring function.

Another corporate governance mechanism is the market for corporate control (Walsh & Seward 1990). If managers do not act in the best interest of shareholder, then firm performance will decrease. The decreasing of firm performance will be followed by ownership changing. The market for corporate control consists of all mergers, acquisitions, and reorganizations including those by a competitor, a conglomerate, or a private equity buyer (Larcker & Tayan, 2015).

This study develops a causality model to test whether internal mechanism of governance through monitoring function or market for corporate control (external mechanism) that were implemented as a corporate governance mechanism in Indonesia or both of them. This study will give a contribution to ownership and firm performance relationship, in term of agency problem and market for corporate control.

Most studies in Indonesia analyzed corporate governance as an internal mechanism (Sumarno, Widjaja, & Subandriah, 2016; Andriana & Panggabean, 2017; Mulyono, Suprapto, & Prihandoko, 2018), then this study will give empirical evidence whether internal, external, or both mechanism that was implemented as a corporate governance mechanism in Indonesia using causality test. The causality test may predict causality between ownership and firm performance, whether ownership is causing firm performance, firm performance is causing ownership or both event, there is said to be a feedback relationship between ownership and firm performance.

Internal and external mechanism of corporate governance gives different consequences of ownership structure and firm performance. In the internal
mechanism, ownership concentration can be used to align managers’ and owners’ interest. This suggests that ownership influences firm performance. In the external mechanism, if managers do not act in the best interest of shareholder, then firm performance will decrease. The decreasing of firm performance will be followed by ownership changing, through mergers or acquisition. This suggests that firm performance influences ownership. Those will raise an interesting question, whether ownership is caused by firm performance or vice versa.

Some studies by Al-Haddad, Alzurqan, & Al-Sufy (2011), Sumarno, Widjaja, & Subandriah (2016), Andriana & Panggabean (2017), and Mulyono, Suprapto, & Prihandoko (2018), support the argument that better corporate governance tends to have better performance, then there is a positive relationship between corporate governance and firm performance. Theoretically, Khan (2011) explained that corporate governance also enhances the long-term shareholder value by the process of accountability of managers and by enhances the firm’s performance. It also eliminates the conflict of ownership and control by separately defines the interest of shareholders and managers.

Al-Haddad, Alzurqan, & Al-Sufy (2011) found a positive direct relationship between corporate governance and corporate performance. Other studies in corporate governance using index (CGPI-Corporate Governance Perception Index) and stock return, conducted by Mulyono, Suprapto, & Prihandoko (2018). They found that corporate governance, among other variables, influenced stock prices. Sumarno, Widjaja, & Subandriah (2016) studied the implementation of Good Corporate Governance principles (based on OECD principles) in Indonesia to profitability and firm value and found that there was a positive and significant impact. Andriana & Panggabean (2017) using manufacturing companies listed in IDX found that GCG mechanisms (managerial ownership, institutional ownership, the proportion of independent commissioners) had a significant effect on financial performance (ROE).

The results of the studies in corporate governance and corporate performance are mixed. Some support the argument of a positive relationship, as mentioned before, but some are mixed (Bhagat & Bolton, 2008; Danoshana & Ravivathani, 2013; Marashdeh, 2014; Dzingai & Fakoya, 2017) and some do not support (Heracleous, 2001; Makki, Abdul, & Lodhi, 2013; Basyith, 2016).

Bhagat & Bolton (2008) find that better governance as measured by Gompers, Ishii, & Metrick (2003) index and Bebchuk, Cohen, & Ferrell (2009) index, stock ownership of board members and CEO-Chair separation is significantly positively correlated with better contemporaneous and subsequent operating performance. But, board independence is negatively correlated with the better contemporaneous and subsequent operating performance. Dzingai & Fakoya (2017) examined the effect of corporate governance structures on firm financial performance using secondary data from the Johannesburg Stock Exchange (JSE). The results indicated there was a weak negative correlation between ROE and board size, and a weak, but positive, a correlation between ROE and board independence. Additionally, there is a positive, but weak, correlation between ROE and sales growth, but a negative and weak relationship between ROE and firm size. The study suggests that effective corporate governance through a small effective board and monitoring by an independent board result in increased firm financial performance.

Corporate governance can be highly influential to organizational performance in so far as it is related to the strategic management of corporations. Marashdeh (2014) examined the effect of corporate governance on firm performance in Jordan. The empirical evidence reveals a mixed of results. The findings fail to reveal any significant impact on the board size on firm performance. However, CEO duality tends to have a positive effect on the firm
performance, which indicates that the Jordanian firms perform better if the chairman and the CEO roles are combined in a single individual. It was also found that Non-Executive Directors (NEDs) have a negative impact on firm performance, which is inconsistent with the monitoring hypothesis of agency theory, which holds that the NEDs play an important role in the board as a source of experience, monitoring services, reputation and expert knowledge with the likelihood to improve firm performance. Furthermore, the findings report positive and negative impacts of managerial ownership and ownership concentration on firm performance (respectively). Finally, the findings reveal a positive relationship between foreign ownership and firm performance.

Another study in Sri Lanka conducted by Danoshana & Ravivathani (2013). They found that variables of corporate governance significantly impact on firm’s performance and board size and audit committee size have a positive impact on firm’s performance. However, meeting frequency has a negative impact on a firm’s performance. Those studies in ownership and firm performance suggest that performance is a function of ownership.

While the study of Heracleous (2001) found that CG best practices are irrelevant to performance, furthermore, Heracleous (2001) explained that there is a possibility that different types of organizations require different practices in corporate governance. Basyith (2016) studied in Indonesian-listed companies and found that corporate governance variables (commissioners, directors, education, and capital employed efficiency) had no impact on firm performance (Tobin’s Q). In the Karachi Stock Exchange, Makki, Abdul, & Lodhi (2013) developed a model linking corporate governance, and financial performance then verifies it through structural equation modeling based on partial least square. The study concludes that corporate governance does not improve financial performance consistently. Rather it proposes that corporate governance can enhance it significantly through exploiting intangible resources.

In the market for corporate control, the price of a stock reflects not only the value of corporate assets but also the performance of management in realizing that value (Larcker & Tayan, 2015). Then the board of an underperforming company has the choice to replace management or sell the entire company to new owners who can manage its assets more profitability. According to Jensen & Ruback (1983), stockholders have no loyalty to incumbent managers. They simply choose the highest dollar value offer from those presented to them in a well-functioning market for corporate control, including sale at the market price to anonymous arbitrageurs and takeover specialists. Takeovers can occur through merger, tender offer, or proxy contest, and sometimes elements of all three are involved.

Traditional perspective on the market for corporate control is that it constitutes an essential component in external corporate governance mechanisms. If a firm does not perform well or cater to shareholders’ interests, it will simply become a takeover target, and the incompetent incumbent management will be replaced with a more efficient team of new managers (Manne, 1965). Agency problem arises when management acts for their benefit at the expense of shareholders. In the market for corporate control, if the firm performance decreases, then there is an opportunity to be taken over and there will changing in ownership. The studies in the market for corporate control by Manne (1965), Jensen & Ruback (1983), and Larcker & Tayan (2015) suggest that ownership is a function of performance.

METHODS

Samples in this study are public companies, listed in IDX. The samples are selected using purposive sampling method, based on the following criteria: (1) manufacturing companies, listed in the IDX from 2012-2016; (2) the financial statement data are available for the reporting year 2012-2016. Both
criteria are needed to compute ownership and also firm performance; and (3) the sample firms publish audited financial statements using reporting period ended on December 31st.

Ownership structures in this study are institutional ownership proportion by the domestic institution. This is because IDX is characterized, among other things, by the domination of large shareholders, especially domestic institutions, then a large proportion of domestic institution ownership will have an impact on performance. Proportion ownership by domestic institutions used to measure ownership concentration using Herfindahl Index (Demsetz & Lehn, 1985; Claessens, 1997; Gunarsih, 2003). Herfindahl Index Domestic Institution (HI_DOM) is the sum of a square from proportion by the domestic institution, compute using the following formula.

\[ HI_{DOM} = \frac{\sum_{i=1}^{n} (Proportion\ of\ Di^2)}{n} \]  

Where:
- \( HI_{DOM} \) = Herfindahl index of a domestic institution
- Proportion of Di = Ownership proportion by a domestic institution
- \( n \) = Number of a domestic institution

Efficiency as firm performance’s proxy, measured by operating cost to sales ratio or O/S, and sales to assets ratio or S/A. There are two reasons why O/ S and S/ A are used as a proxy for firm performance. First, O/ S and S/ A are proxies of short-term oriented behavior (Gedajlovic & Shapiro, 1998). Second, both ratios are proxies of agency cost (Ang, Cole, & Lin, 2000). Tobin’s Q as market firm performance’s measurement is an indicator of a firm’s prospect, indicates that the higher the Tobin’s Q, the more attractive the firm. Tobin’s Q computed using the following formula:

\[ TQ = \frac{\text{Market value of equity} + \text{book value of debt}}{\text{Book value of total asset}} \]  

Where:
- Market value of equity = stock outstanding \( \times \) closing price
- Book value of debt = book value of debt at the end of the fiscal year
- Book value of total asset = book value of total asset at the end of the fiscal year

Unit root test Dickey and Fuller is implemented to test the stationarity. Variable \( X_t \) is tested using this equation (Thomas, 1997).

\[ \Delta X_t = a + \Phi^* X_{t-1} + u_t \]  

The coefficient of \( \Phi^* \) is estimated base on equation (3). The nonstationarity is not accepted (\( F^* = 0 \)) if \( F^* \) estimated is statistically negative significant.

A panel Granger-causality test base on Granger (1969), will be conducted to test the causality, using two equations:

\[ X_t = \sum_{j=1}^{n} a_j X_{t-j} + \sum_{j=1}^{n} b_j Y_{t-j} + \varepsilon_t \]  
\[ Y_t = \sum_{j=1}^{n} c_j X_{t-j} + \sum_{j=1}^{n} d_j Y_{t-j} + \varepsilon_t. \]  

The definition of causality given by equation (4) and (5), implies that \( Y_t \) is causing \( X_t \) provided some \( b_j \) is not zero. Similarly, \( X_t \) is causing \( Y_t \) if some \( c_j \) is not zero. If both of the events occur, there is said to be a feedback relationship between \( X_t \) and
Y, X is firm performance, using efficiency and also Tobin’s Q while Y is stock ownership represented by Herfindahl Index. According to Erdil & Yetkiner (2004), the literature generally does not provide diversified methods for Granger (1969) causality tests in panel data models.

RESULTS

This section describes the results and discussion. The first part result, consist of descriptive statistics and the causality test. Before the causality between the two variables was tested, a stationarity test and then the co-integration test were conducted first. The second part is a discussion.

Table 1 shows the descriptive statistics. The model consists of 718 observations. The mean of HI_DOM (Herfindahl Index of domestic institution) is 13.86 percent, while the highest is 97.49 percent. This suggests that the average of ownership concentration is 13.86 percent, while the highest concentration is 97.49 percent. If HI_DOM equal to 1 (100 percent), this means that the company owned by one domestic institution, then 97.49 percent means that the company owned by a small number of the owner with a high percentage of ownership.

The mean of three firm performance’s indicators, measured by operating cost to sales ratio (O/S), sales to assets ratio (S/A), and Tobin’s Q (TQ) are 0.98, 0.96, and 1.74 respectively. The highest number of those variables are 21.34, 5.66, and 62.74. The mean of TQ that more than one (1.738384) suggests the market values listed company higher than the book value (note: if the TQ= 1, this means that the market values the company equal to book value).

Table 2 shows the stationarity test using unit root. The non-stationarity is not accepted (Φ*= 0) if Φ* estimated is statistically negative significant. The results show that all of the t statistics of Φ*are negative significant at 1 percent level but in the different lag level. This suggests that all of the variables are stationary at different lag level. The lag length of HI_DOM, O/S, S/A, and TQ are 7, 0, 8, and 8 respectively.

The lag length is how many terms back down the Auto-Regressive process to test for serial correlation or time differences. Lag length 7 means that there are 7-time differences in the autoregressive process in the stationarity test. While lag length 0 means that there were no time differences in Auto-Regressive.

Table 1. Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>HI_DOM</th>
<th>O/S</th>
<th>S/A</th>
<th>TQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.138645</td>
<td>0.979598</td>
<td>0.955352</td>
<td>1.738384</td>
</tr>
<tr>
<td>Maximum</td>
<td>0.974959</td>
<td>21.35618</td>
<td>5.659154</td>
<td>62.73458</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.000000</td>
<td>0.000000</td>
<td>0.000000</td>
<td>-9.503892</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.209758</td>
<td>1.190321</td>
<td>0.709783</td>
<td>3.312362</td>
</tr>
<tr>
<td>Observations</td>
<td>718</td>
<td>718</td>
<td>718</td>
<td>718</td>
</tr>
</tbody>
</table>

Table 2. Stationarity Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>HI_DOM</th>
<th>O/S</th>
<th>S/A</th>
<th>TQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lag length</td>
<td>7</td>
<td>0</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>t statistic of Φ*</td>
<td>-11.29934***</td>
<td>-27.76126***</td>
<td>-10.11631***</td>
<td>-8.694496***</td>
</tr>
<tr>
<td>Prob. of t Statistics</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Note: *** significant at 1 percent level
Cointegration Test

Cointegration test is conducted before the test of causality. If two series variable I(1) cointegrated, there would be causality at least in one direction (Granger, 1988). The result of cointegration tests based on trace statistics is as in Table 3.

Table 4 shows that all of the three series of trace test is significant at level 1 percent. These indicate that there are two co-integrating eqn(s) at the 0.05 level in the three series. These suggest that there will be causality at least in one direction in those three series.

Table 4 shows the result of pairwise Granger causality test of 3 pairs; they are HI_DOM and O/S, HI_DOM and S/A, and the last HI_DOM and TQ. The results of the first pair show that there is causality between HI_DOM and O/S. The F-Statistic of causality test for O/S does not Granger Cause HI_DOM is 4.62284, statistically significant at 1 percent level. The F-Statistic of causality test for HI_DOM does not Granger Cause O/S is 1.81903, statistically significant at 10 percent level. This suggests that there is causality in the first pair. HI_DOM is causing O/S, and O/S is causing HI_DOM or ownership is causing firm performance, and firm performance is causing ownership.

The results of the second pair show that there is a causality between HI_DOM and S/A. The F-Statistic of causality test for S/A does not Granger Cause HI_DOM is 2.09835, statistically significant at 5 percent level. The F-Statistic of causality test for HI_DOM does not Granger Cause S/A is 6.72722, statistically significant at 1 percent level. This suggests that there is causality in the second pair. HI_DOM is causing S/A, and S/A is causing HI_DOM or ownership is causing firm performance, and firm performance is causing ownership.

The results of the third pair show that there is causality between HI_DOM and TQ. The F-Statistic of causality test for TQ does not Granger Cause HI_DOM is 2.26487, statistically significant at 5 percent level. The F-Statistic of causality test for DOM does not Granger Cause TQ is 3.00535 statistically significant at 1 percent level. This suggests that there is causality in the third pair. HI_DOM is causing TQ and TQ is causing HI_DOM or ownership is causing firm performance, and firm performance is causing ownership.

<table>
<thead>
<tr>
<th>Series</th>
<th>Trace Statistics</th>
<th>Hypothesized No. of CE(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HI_DOM and O/S</td>
<td>300.0011***</td>
<td>129.1021***</td>
</tr>
<tr>
<td>HI_DOM and S/A</td>
<td>310.9472***</td>
<td>141.6995***</td>
</tr>
<tr>
<td>HI_DOM and TQ</td>
<td>323.2386***</td>
<td>137.8557***</td>
</tr>
</tbody>
</table>

Table 3. Cointegration test

Note: *** significant at 1 percent level

<table>
<thead>
<tr>
<th>Pair</th>
<th>Null Hypothesis</th>
<th>F-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HI_DOM and O/S</td>
<td>O/S does not Granger Cause HI_DOM</td>
<td>4.62284***</td>
<td>2.E-05</td>
</tr>
<tr>
<td></td>
<td>HI_DOM does not Granger Cause O/S</td>
<td>1.81903*</td>
<td>0.0705</td>
</tr>
<tr>
<td>HI_DOM and S/A</td>
<td>S/A does not Granger Cause HI_DOM</td>
<td>2.09835**</td>
<td>0.0339</td>
</tr>
<tr>
<td></td>
<td>HI_DOM does not Granger Cause S/A</td>
<td>6.72022***</td>
<td>2.E-08</td>
</tr>
<tr>
<td>HI_DOM and TQ</td>
<td>TQ does not Granger Cause HI_DOM</td>
<td>2.26487**</td>
<td>0.0215</td>
</tr>
<tr>
<td></td>
<td>DOM does not Granger Cause TQ</td>
<td>3.00535***</td>
<td>0.0025</td>
</tr>
</tbody>
</table>

Table 4. Pairwise Granger Causality Tests

Note: ****, ***, and * are significant at 1 percent, 5 percent, and 10 percent level respectively
DISCUSSION

This study develops a causality model to test whether internal mechanism of governance through monitoring function or market for corporate control that was implemented as a corporate governance mechanism in Indonesia or both of them. This study will give contribution in ownership and firm performance relationship based on agency problem in the perspective of monitoring function and the market for corporate control.

The pairwise Granger causality test of 3 pairs, HI_DOM and O/S, HI_DOM and S/A, and the last HI_DOM and TQ show that there were bi-causality relationships between ownership and firm performance. The results are consistent for firm performance in book value (O/S and S/A) and also market value (TQ).

The causality between ownership and firm performance supports Khan (2011)’s argument that corporate governance also enhances the long-term shareholder value by the process of accountability of managers and by enhances the firm’s performance.

This result also consistent with Al-Haddad, Alzurqan, & Al-Sufy (2011), Sumarno, Widjaja, & Subandriah (2016), Andriana & Panggabean (2017), and Mulyono, Suprapto, & Prihandoko (2018), that support the argument that better corporate governance tends to have better performance, since there is causality between corporate governance and firm performance.

The causality between firm performance and ownership support the market for corporate control argument. If the firm performance decreases, then there is an opportunity to be taken over, and there will be a changing in ownership.

Further study may consider more endogeneity variables such as organizational strategy (merger, acquisition) the type of industry, the company’s size and its level of risk as in Cabeza-Gracia & Gómez-Ansón (2011). The relationship between ownership concentrations on performance is considered in a nonlinear relationship as Villegas-Guerrero et al. (2018) that analyzed that different levels of ownership concentration have on performance could be affected by the roles performed by board members. Then nonlinear relationship and also the role of board members may be considered in further studies.

CONCLUSION AND SUGGESTIONS

Conclusion

The results of the study show that there is a causality relationship between ownership and firm performance, ownership is causing firm performance and firm performance is causing ownership. These suggest that both the monitoring function and the market for corporate control were implemented as a corporate governance mechanism in Indonesia. These results give contribution in ownership and firm performance relationship base on agency problem in the perspective of monitoring function and the market for corporate control.

Suggestions

Further study may consider more endogeneity variables in the causality model and also analyze another industry to give more comprehensive results.

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