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## Environmental performance and corporate governance: What we learn from Japan

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#### ABSTRAK

Studi ini bertujuan untuk mengetahui bagaimana kinerja lingkungan, tata kelola perusahaan, keunggulan kompetitif, dan kinerja keuangan terkait satu sama lain di Jepang. Data yang digunakan adalah data dari perusahaan subsektor kimia, farmasi, dan permesinan yang terdaftar di Japan Exchange Group pada tahun 2013 - 2018. Penelitian ini merupakan penelitian eksplanatori pendekatan kuantitatif dan mengimplementasikan pendekatan Partial Least Square (PLS). Penelitian ini menemukan bahwa dewan direksi dan kinerja perusahaan tidak berpengaruh signifikan terhadap kinerja lingkungan perusahaan, sedangkan pengendalian dan struktur kepemilikan perusahaan memberikan hasil yang berbeda. Kemudian, kinerja lingkungan dan struktur kepemilikan terbukti memberikan kontribusi yang signifikan terhadap keunggulan kompetitif perusahaan. Berkaca dari temuan Jepang ini, studi ini menyarankan beberapa rekomendasi kepada Kementerian Lingkungan Hidup dan Kehutanan Indonesia untuk mengembangkan skema dan konsep pelestarian lingkungan yang diterapkan oleh perusahaan publik di Indonesia dan kepada Kementerian Keuangan Indonesia untuk mengembangkan konsep akuntansi lingkungan yang dapat diterapkan untuk perusahaan publik di Indonesia.

#### ABSTRACT

This study aims to acknowledge how environmental performance, corporate governance, competitive advantage, and financial performance-linked each other in Japan. The data used are data from chemical, pharmaceutical, and machinery sub-sector companies listed on the Japan Exchange Group 2013 - 2018. This research was explanatory research using a quantitative approach and implemented Partial least Square (PLS). This study found that

the board of directors and firm performance have no significant effect on the company's environmental performance, while corporate control and ownership structure provide a different result. Then, environmental performance and ownership structure have been proven to bring a significant contribution to the company's competitive advantage. Reflecting on Japan, this study suggests several recommendations to the Indonesian Ministry of Environment and Forestry to develop environmental conservation schemes and concepts implemented by public companies in Indonesia and the Indonesian Ministry of Finance to develop applicable environmental accounting concepts for public companies in Indonesia.

#### INTRODUCTION

Along with the times, the world industry continues to grow and experience changes. According to The Organization for Economic Co-operation and Development (OECD 2015), the industry's growth is making business activities significantly impact the environmental problem, such as air pollution, climate change, deforestation, waste, diminution of biodiversity, etc. Business activities describe the production of goods and services that cannot be separated from the use of natural resources. Wagner (2005) mentions that the interaction between business and the environment can be measured through a performance in the environment.

Environment problems from business activities are a central concern in the whole country. Many countries are already making an effort to reduce environmental problems, such as increasing environmental regulations, improving the environmental performance/index, which the business companies should comply with, and providing a strict punishment to the environmental destroyers. According to Chiang et al. (2015), Japan is one of the "leading countries" that implements environmental conservation efforts. One of the Japanese manifestations of environment preservation is the Environmental Accounting Guidelines as a sustainable reporting for Japan's Companies (Cortez & Cudia, 2010; Kokubu & Nashioka, 2005). This guideline provides a specific standard on reporting environmental conservation costs in detail across various business sectors also other environmental accounting information (Yook et al., 2017).

Environmental accounting is an important measurement to discover how companies perform their business and protect the environment due to their business activities (Wagner, 2005). It helps companies identify and quantify investments and costs associated with the environment's conservation as well as having an insight into the benefits of the potential investment and the cost associated with it, so it leads the company to improve its business activities, support companies' decision-making (Japan Ministry of The Environment., 2005; Yook et al., 2017), and make the company more competitive (Chiou et al., 2011; Hansen & Mowen, 2009). Prior studies investigated the environment performance using indicators such as environmental

strength and weakness, weighting the emission of pollutants, as well as a reduction in consumption and environmental compliance (Chiou et al., 2011; Glass et al., 2016; Horváthová, 2012; Walls et al., 2012). This study uses Japan Environmental Accounting Guidelines to measure environmental performance because it presents consistency and comparability information in conventional environmental cost and has been used as a proxy of how the company' protects the environment due to its business activities (Yook et al., 2017).

It is believed that implementing environment conservation which leads to achieving excellent competitive and increasing financial performance, has been influenced by the company's corporate governance. Solomon (2020) described corporate governance as a system to ensure that the company demonstrates accountability to stakeholders and acts in responsible ways, including how they threaten the environment. Internal management creates a mechanism that influences the company's decision-making responsibility to the environment (Miroshnychenko et al., 2019). The company's governance has a possible chance to reduce the conflict of interests between shareholders and management (agency problem) and align various shareholders' interests, including government and environmentalist, to achieve excellence compete (Nginyo et al., 2018). The company capable of creating excellence compete potentially improves its performance by creating higher profitability and market value (Dickinson & Sommers, 2012).

This research aims to determine how corporate governance (with a proxy of board structure, corporate control, and ownership structure), environmental performance, competitive advantage, and financial performance are linked together in Japan Companies. Internal and external board structures tend to provides different perspectives on making a financial and non-financial decision; therefore, the variety of Board of Directors (BoD) and Ownership Structure (OS) potentially make a different action and suggestion on tackling the environmental problems. Taking actions on natural conservation requests judgment from the third party to verify whether the current environmental cost has been reported on the proper report and comply with the regulation. Therefore, the existence of auditors as a Corporate Control (CC) will be important. Furthermore, it is argued that performing green actions requires a high level of resources; therefore, it is believed that the rich companies tend to perform well on the natural resources that potentially enhance their competitive advantage (CA).

Previous research has been conducted in order to analyze the influence of environmental performance to the company's economic performance, corporate governance and competitive advantages with different perspectives in Indonesia and Japan. For instance, Damayanti (2018) and Deswanto and Siregar (2018) investigated Indonesian environmental performance and economics' consequences, while Chariri et al. (2019) analyzed the impact of corporate governance – with proxies of institutional ownership, audit committee- and the industrial sectors to the companies'

environmental investment. A comparative study investigating the link between environmental risk and financial performance in ASEAN countries (Indonesia, Singapore, Vietnam, Malaysia, Thailand and Philippine) has been conducted before but this study has not evaluated the involvement of corporate governance and competitive advantage (Nuzula et al., 2019). This is the first comprehensive study to examine the link between environmental performance, corporate governance and competitive advantage using Japan situation and is reflected to the Indonesian perspective. Japan has been proven having a high level of sustainability disclosure which focused on the environmental report by performing 90 per cent on average level of sustainability disclosure compared to India (88 percent), South Korea (85 percent) as well as Indonesia (72 percent) (Laskar, 2018). As one of the countries with many sustainable reports, Japan provides information related to the environmental sustainability reports completely and potentially being a benchmark to the other countries (Cortez & Cudia, 2010) and the level of disclosure has been improved during a decade due to maintaining better relationship with stakeholders (Laskar, 2018). Although Japan put environmental disclosure as a voluntary report, however majority of Japan companies report it in GRI standard and make the environmental performance in this country reach on the high level of achievement (Laskar, 2018; Sharma, 2013). In contrary, conducting environmental and social responsibility are compulsory in Indonesia, however there is a lack of guidelines in how to implement the regulation (Sheehy & Damayanti, 2019). As a result, the implementation of environmental and social actions might vary for each company. Therefore, conducting study in Japan perspective will be important since the results will be compared to Indonesia's empirical condition, which is expected to recommend the Indonesian government improve the accounting environment's guidelines and policies. This study contributes to the body of knowledge since there is less study investigates the implementation of environmental regulation in Japan followed by the reflection for Indonesian Government. This study also provides recommendation for Indonesian Government in implementing environmental conservation scheme and environmental accounting in financial report so Indonesian environmental and social report will be clear and wellmeasured.

#### LITERATURE REVIEW AND HYPOTHESIS

## **Corporate Governance and Environmental Performance**

Agency theory elaborates the agency relationship between the principal (shareholders) and agent (management) in which sometimes each party has a conflict of interest that leads to agency conflict (Jensen & Meckling, 1976). Asymmetries information occurs when the management has superior information on how the company has been operated and managed that potentially leads a moral hazard that sacrificed the shareholder's wealth. As a result, the principal has to spend more

expenses to ensure that all agents' decisions do not harm them. Corporate governance is believed to reduce agency conflict by providing board experience and board independence, which is crucial in providing monitoring information (Badu & Appiah, 2017). A high level of corporate governance that a large board can indicate and an effective audit committee significantly impacts reducing the agency cost (Allam, 2018). The more corporate governance quality that companies have, the least conflict will be faced.

Providing a reliable report is a way to reduce a conflict between agent and principle. Besides a financial report, a non-financial one such as an environmental report is believed to reduce the conflict by disclosing information on how the company treats the nature that impacted the business operations. Environmental disclosure reduces the chance of products banned by the environmentalist or customers and enhances the company's reputation (Alipour et al., 2019). Performing an excellent environmental performance is argued influenced by the internal management since the environment decision is not a financial issue and required a judgment of the management whether this issue becomes major attention. Miroshnychenko, Barontini, and Testa (2019) stated that EP is influenced by internal corporate governance mechanisms such as ownership, the BoD, and top management. The board independence significantly reinforces the positive effect of environmental disclosure quality on performance. They monitor the directors to reduce personal interest and improve non-financial disclosure quality, such as environmental reports (Alipour et al., 2019).

**H1:** Board of Directors positively influences the environmental performance.

Besides having an effective BoD, the environmental performance is believed to be influenced by the CC. The role of the auditor is vital in ensuring all information provided by the company is reliable. When the company allocates their resource to the non-profitable issue, such as environmental cost, the company must disclose it on the financial report. The investor will pay attention on how the executive spends the money and the potential impact from the allocation, and non-financial activity is one of the red flag information for them. As a non-financial activity, environmental action will attract a debate and question from the shareholders, whether these activities significantly impact their wealth. Therefore, an auditor's existence is important to control its finances and system to tackle the environmental problem (Allam, 2018).

The investor will gain confidence in how the company reports all financial and non-financial activities when it provides an effective CC such as an independent auditor (Alipour et al., 2019).

**H2:** Corporate Control positively influences the environmental performance.

Spending a company's resources is basically required a strategic decision from the executive. When the executive allocates cost to conduct an EP, permission from the owner should be obtained. When the owners tend to have a higher awareness of conducting EP, the executive can perform more activities. Block ownership, foreign ownership, and dispersed ownership enhanced social and environmental disclosure (Baba & Baba, 2021). The owner who has a role in monitoring the executive's activities suggests and recommends how the company spend the resource to solve the natural problems or whether allocating the cost in green performance becomes a priority. The higher proportion of foreign ownership improves corporate environmental disclosure quality (Ismail et al., 2018). A company with investors from other countries with different norms and customs, law, and regulation on the business affair tend to push the company to comply with the global capital market by providing more information about environmental disclosure.

**H3:** Ownership structure positively influences the environmental performance.

#### Financial Performance and Environmental Performance

Slack resource hypothesis mentioned that companies with better financial performance could potentially provide a slack resource such as finance and other resources that lead to a chance to invest in the environmental issue (Damayanti, 2018; Waddock & Graves, 1997). Slack-resource is priorly describes as profitability or financial performance (FP) (Melo, 2012). To enhance stakeholder expectations, the company might improve EP and develop valuable and non-substitutable resources (Kamukama et al., 2017; Qi et al., 2014). Schaltegger et al. (2001) explained two causal effects of EP and economic performance. It is believed that companies with a high level of FP tend to bring a good EP, since performing a good environmental issue is a kind of luxury thing that is not being vital information for the stakeholders (Damayanti, 2018; Schaltegger et al., 2001). In Indonesia, listed companies with a good financial position (ROA, ROE, and Tobin's Q) bring a significant contribution to the company's EP. In contrast, for SOEs, accounting-based performance is the only financial position that improves its EP (Damayanti, 2018). Unfortunately, this finding is not in line with (Deswanto & Siregar, 2018), which found that the FP does not affect the environmental disclosure.

**H4:** Financial performance positively influences the environmental performance.

## **Environmental Performance and Competitive Advantage**

Mowen et al. (2016) stated that companies that understand the cause of environmental costs might redesign all the business processes to reduce the raw materials and pollutants released into the environment. This action leads to reducing

current and future environmental costs that potentially make the company more competitive. CA arising from the good EP is also reflected in the company's relationship with consumers. Chiou et al. (2011) states that more customers and buyers expect suppliers to reduce natural energy consumption during the production process to minimize the environment's negative impact. The environmental conservation efforts attracted customers, leading to the company's CA; therefore, companies need to increase environmental awareness. Singh et al. (2019) stated that providing environmental training to the employee potentially improves the company's role in reducing pollution and overall operating cost and improving its reputation, which affects its competitive advantages. Then, in Southern Brazil, the company that creates environmental innovation in the operational and business process improves its CA (Sellitto et al., 2020).

**H5:** Environmental performance positively influences competitive advantage.

## Ownership and Competitive Advantage

Corporate governance creates a variety of ways to improve the agency problems between principle (shareholders) and agency (managers) in assuring that all funds are not wasted in unattractive projects and activities (Miozzo & Dewick, 2002). Acceptable corporate governance practices can prevent a company from arising a conflict of interest to align shareholders' and management's interests. In this condition, management can focus on increasing the company's competitiveness. Large individual ownership and foreign ownership, as proxy of corporate governance, plays important role in guiding the management to improve the competitiveness. Nginyo et al. (2018) states that good corporate governance can direct corporate decision-making by considering stakeholders' broad needs and aligning shareholders' interests to achieve a competitive advantage. The weak board monitoring in the business group firms associated with the product market competition and corporate governance structure is proven to improve its competition from the foreign players (Singla & Singh, 2019).

**H6:** Ownership Structure positively influences competitive advantage.

## **Ownership and Financial Performance**

The concept of corporate governance is based on agent accountability to ensure the maximization of shareholders' wealth, with a corporate governance mechanism, the ability to mitigate agency problems by aligning the interests of agents with shareholders (Darko et al., 2016). By mitigating agency problems, companies can reduce agency costs arising from conflicts of interest. According to Latif et al. (2013), good corporate governance contributes to improving company performance and increasing outside capital access. Corporate governance serves public policy purposes. It leads to reducing the vulnerability of financial crises and reducing capital costs and

transaction costs. Using a Qualitative Comparative Analysis (QCA), Madanoglu et al. (2018) mentioned that three configurations of corporate governance provision lead to high FP among restaurants in the U.S. and the central core poison pill strategy. Then, larger boards and foreign ownership stakes in Turkey's family business positively impacted the company's Tobin's Q and ROA (Ciftci et al., 2019). Audit committee independence is significantly positive to the firm value, and the independent directors will provide an additional value if they are embedded in the exemplary commitment (Singla & Singh, 2019).

**H7:** Ownership structure positively influences financial performance.

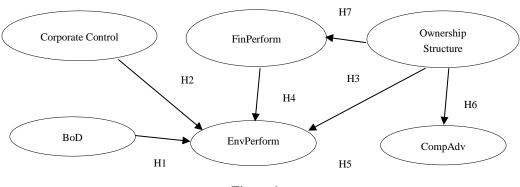


Figure 1 Research Model

#### **RESEARCH METHODS**

This research is explanatory research with a quantitative approach. The secondary data were collected from the selected companies' annual reports and their environmental or sustainability reports. The data about BoD, CC, OS and CA were collected from companies' annual reports whereas the data about EP were gained from the environmental reports. This research comprises 568 companies from 211 chemical companies, 69 pharmaceutical companies, and 288 machinery sub-sector companies listed in the Japan Exchange Group (JPX) in 2013 – 2018. Besides the fact that these sectors have a significant impact on the environmental resources and Japan is one of the "leading countries" to preserve the environment (Chiang et al., 2015), the data regarding environmental accounting able to find easily (Cortez & Cudia, 2010).

A purposive sampling was implemented to select the research sample, based on the criteria(s) whether companies have environmental / sustainability report and annual report which present the complete data about all indicators during 2013-2018. After conducting a purposive sampling technique to select the sample from their availability of data related to the BoD, CC, OS, EP, CA, and FP, 16 companies had included in the study, so there were 96 unit-analysis involved. The analytical method used in this research is Partial Least Square (PLS) using the warpPLS software.

Table 1 Number of Samples

| No                        | Company                               |  |  |  |
|---------------------------|---------------------------------------|--|--|--|
| Chemical Sub Sector       |                                       |  |  |  |
| 1                         | Showa Denko K.K.                      |  |  |  |
| 2                         | Sumitomo Chemical Company, Limited    |  |  |  |
| 3                         | Tokuyama Corporation                  |  |  |  |
| 4                         | Kaneka Corporation                    |  |  |  |
| 5                         | Mitsubishi Gas Chemical Company, Inc. |  |  |  |
| 6                         | Mitsui Chemicals, Inc.                |  |  |  |
| 7                         | Daicel Corporation                    |  |  |  |
| 8                         | Sekisui Chemical Co., Ltd.            |  |  |  |
| 9                         | Ube Industries, Ltd.                  |  |  |  |
| 10                        | Sekisui Plastics Co., Ltd             |  |  |  |
| 11                        | Kao Corporation                       |  |  |  |
| 12                        | Fujifilm Holdings Corporation         |  |  |  |
| Pharmaceutical Sub Sector |                                       |  |  |  |
| 13                        | Santen Pharmaceutical Co., Ltd.       |  |  |  |
| 14                        | Daiichi Sankyo Company, Limited       |  |  |  |
| Machinery Sub Sector      |                                       |  |  |  |
| 15                        | Sumitomo Heavy Industries, Ltd.       |  |  |  |
| 16                        | NSK Ltd.                              |  |  |  |

The measurements of each variable are described in Table 2 below.

Table 2
Conceptual and Operational Definition

| Conceptual and Operational Definitions |  |  |  |  |
|--|--|--|--|--|
| Variable                               | Indicators                             |  |  |  |
| Board of Director                      | Board size                             |  |  |  |
|  | Board Independence                     |  |  |  |
|  | Board Gender                           |  |  |  |
| Corporate Control                      | Auditor Size                           |  |  |  |
| _                                      | Independent Auditor                    |  |  |  |
| Ownership Structure                    | Financial institutions ownership       |  |  |  |
|  | Foreign ownership                      |  |  |  |
|  | Individual ownership                   |  |  |  |
| <b>Environmental Performance</b>       | <b>Environmental Conservation Cost</b> |  |  |  |
|  | Economic Benefit                       |  |  |  |
| Competitive Advantage                  | Economies of scale                     |  |  |  |
|  | Innovation                             |  |  |  |
|  | Capital Expenditure                    |  |  |  |

The board size, board independence and board gender are measured by total number of BoD, ratio of outside director, and ratio of female director respectively. The OS is represented by the percentage of financial institutional ownership, foreign ownership and individual ownership to the number of company's share. Environmental conservation cost is derived from the investment amount and expenses amount from environmental conservation cost, whereas the economic benefit is calculated from the benefit that has been gained by the companies from the environmental conservation in the monetary value. Economic of scale is measured by cost of sales and innovation is measured by research and development expense divided

by net sales, whereas capital expenditure is calculated by ratio of depreciation expenses per net sales.

## RESULT AND DISCUSSION

## **Evaluation of the Measurement Model**

The research model consists of six variables to develop the model, namely board of directors (BoD), corporate control (CC), ownership structure (OS), Environmental performance (EP), competitive advantage (CA), and financial performance (FP). Evaluation of the measurement model is a stage to test validity and reliability.

## **Evaluation of Formative Model Validity**

The formative model's validity is evaluated by calculating the weight's value, and an instrument is declared valid if p-value  $\leq 5$  percent as illustrated in the table below.

Table 3
Validity Model Formative

| Validity Model Formative       |           |        |       |         |  |  |  |
|--------------------------------|-----------|--------|-------|---------|--|--|--|
| Variable                       | Indicator | Weight | S.E.  | P-Value |  |  |  |
| Board of Director (BoD)        | Bsize     | -0.461 | 0.090 | < 0.001 |  |  |  |
|                                | Bindep    | 0.453  | 0.090 | < 0.001 |  |  |  |
|                                | Bgender   | 0.328  | 0.093 | < 0.001 |  |  |  |
| Corporate Control (CC)         | AudSize   | 0.648  | 0.085 | < 0.001 |  |  |  |
| _                              | OutAudi   | 0.648  | 0.085 | < 0.001 |  |  |  |
| Ownership Structure (OS)       | FinOwn    | 0.087  | 0.100 | 0.191   |  |  |  |
| _                              | Foreign   | 0.531  | 0.088 | < 0.001 |  |  |  |
|                                | IndivOw   | -0.546 | 0.088 | < 0.001 |  |  |  |
| Environmental Performance (EP) | EnvInv    | 0.416  | 0.091 | < 0.001 |  |  |  |
|                                | EnvExp    | 0.461  | 0.090 | < 0.001 |  |  |  |
|                                | EcoBen    | 0.439  | 0.090 | < 0.001 |  |  |  |
| Competitive Advantage (CA)     | EcoScal   | -0.528 | 0.088 | < 0.001 |  |  |  |
| _                              | Innov     | 0.524  | 0.088 | < 0.001 |  |  |  |
|                                | CapReq    | 0.053  | 0.101 | 0.300   |  |  |  |
| Financial Performance (FP)     | ROA       | 0.365  | 0.092 | < 0.001 |  |  |  |
|                                | ROE       | 0.336  | 0.093 | < 0.001 |  |  |  |
|                                | NPM       | 0.354  | 0.093 | < 0.001 |  |  |  |

The weight value of each indicator of BoD represents the strength of the indicators to the BoD. Having a negative value (-0.461) indicates that having a high number of board members tends to reduce the BoD' quality. Meanwhile, the better the Bindep and bgender indicators potentially increase the BoD variable. Based on the table above, only three indicators have negative values (individual ownership and economy of scale), which means that the better their values lead to reducing OS and CA, respectively.

## The Goodness of Fit Model

Table 4
The goodness of Fit Model

| The goodness of Fit Woder      |       |       |  |  |  |
|--------------------------------|-------|-------|--|--|--|
| Endogen                        | $R^2$ | $Q^2$ |  |  |  |
| Environmental Performance (EP) | 0.229 | 0.245 |  |  |  |
| Competitive Advantage (CA)     | 0.228 | 0.216 |  |  |  |
| Financial Performance (FP)     | 0.493 | 0.488 |  |  |  |

The R<sup>2</sup> of the EP variable is 0.229 or 22.9 percent. It can show that the diversity of the variable EP can be explained by the variable BoD, CC, OS, CA, and FP amounted to 22.9 percent. The rest of it can be explained by other variables outside this research. Then the Q<sup>2</sup> variable EP is worth 0.245. It is demonstrated that the variable BoD, CC, OS, CA, and FP have strength predictions on EP.

The R<sup>2</sup> of the variable CA is 0.228 or 22.8 percent. It can show that the diversity of CA can be explained by the variable BoD, OS, and EP amounted to 22.8 percent. In contrast, the remainder is explained by variables other is not addressed in the study of this. Furthermore, the R<sup>2</sup> of the FP is higher by having 49.3 percent. Then the Q<sup>2</sup> of CA is 0.216, which showed that the variables of OS and EP have strength predictions that are sufficiently robust to CA, whereas the OS and EP have strength predictions (0,488) robust to FP.

## **Hypothesis Testing Model**

Model Path Diagram

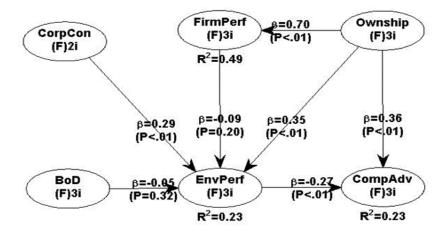


Figure 2
Results of Path Analysis

Table 5
Results of Hypothesis Testing

|                       | results of hij potnesis i |                     |       |           |
|-----------------------|---------------------------|---------------------|-------|-----------|
| Exogen                | Endogen                   | Path<br>Coefficient | S.E.  | P-Value   |
| Board of Director     | Environmental             | -0.048              | 0.101 | 0.318     |
|                       | Performance               |                     |       |           |
| Corporate Control     | Environmental             | 0.294               | 0.094 | 0.001***  |
|                       | Performance               |                     |       |           |
| Ownership Structure   | Environmental             | 0.347               | 0.093 | <0.001*** |
|                       | Performance               |                     |       |           |
| Financial Performance | Environmental             | -0.085              | 0.100 | 0.198     |
|                       | Performance               |                     |       |           |
| Environmental         | Competitive Advantage     | -0.266              | 0.095 | 0.003***  |
| Performance           |                           |                     |       |           |
| Ownership Structure   | Competitive Advantage     | 0.357               | 0.092 | <0.001*** |
| Ownership Structure   | Firm Performance          | 0.702               | 0.084 | <0.001*** |

\*\*\* significant on  $\alpha$ = 0.05

According to the table above, both CC and OS have a significant impact on the EP The more audit size and outside auditor that company has, the more EP that they perform. Auditors and the independent auditor have been identified as a significant role in the company's decision to perform better in natural resource protection. Providing an environmental report tends to reduce the asymmetric information between agents and principles (stakeholders). The principal has more information on how the money has been distributed to the environmental issue and ease the agency conflict (Allam, 2018). Independent auditors' presence improves the stakeholders' confidence in the company's management to tackle the environmental problem that leads to improved environmental reports. The independent auditor's monitor and audit the directors' financial disclosure conducted by the directors reduces personal interest and improves the quality of report and auditing all the expenses spent on the environmental issue (Alipour et al., 2019). The finding of OS impacts significantly on the EP in Japan supports the previous research from Baba and Baba (2021), who found that block ownership, foreign ownership, and dispersed ownership have been identified significant influence on the social and environmental disclosure in Nigeria. The existence of foreign investors with different norms, laws, and regulations motivates the executive to provide more information on how the company handles the natural resources issue to meet the global market requirement (Ismail et al., 2018).

On the other hand, the presence of BoD, neither the size nor the independence, has no significant impact on the company's EP. The cost which distributed on the environmental issue is not influenced by the BoD decision. This finding does not support Miroshnychenko et al. (2019), who found that corporate governance mechanisms such as BoD and top management play a significant role in EP.

Besides BoD, the company's FP has been proven to have no significant impact on how the company tackles the environmental problem. When the slack resource hypothesis describes that companies with high economic resources tend to invest more in the environmental issue (Damayanti, 2018; Melo, 2012; Schaltegger et al., 2001;

Waddock & Graves, 1997) but this hypothesis does not work in Japan. The companies with higher ROA, ROE, and NPM do not straight away invest their resource in natural resources activities. This finding is in-line with Deswanto and Siregar (2018), who found that the FP of companies listed on the Indonesia Stock Exchange and participating in the PROPER Program (Environmental Rating Assessment Program) from the Indonesian Ministry of Environment do not affect the environmental disclosure.

Moreover, EP and OS provide a significant influence on the company's CA, but both variables have a different direction. The effect of OS on CA is positive and significant, which means that getting a better OS leads to the improvement of CA The corporate governance practices, including the structure of company's ownership, whether the owner is foreign or institutional or individual ownership prevent companies from the conflict of interest between agent and principle. The monitoring from foreign investors as the strongest indicator of ownership structure potentially direct the company's decision to achieve the stakeholders' interest by improving the CA The presence of foreign and institutional ownership leads to reducing the agency problems and assuring that all financial resources are not wasted in unattractive activities and projects (Miozzo & Dewick, 2002). Meanwhile, EP's effect negatively impacts the company's CA Since the environmental conservation cost measures the EP, the more cost has been spent on the environmental issue, the less attractive the company's CA is. The company has to spend more tackling the natural problems, leading to the increased total cost. This finding does not support the previous finding from Chiou et al. (2011), who described that the environmental conservation effort attracts customers and buyers that expect the supplier or companies to reduce the natural resources' impact. This finding in Japan also does not align with the finding in Brazil, which found that environmental innovation in the operational and business process leads to improving the company's competitive advantage (Sellitto et al., 2020).

Then, the OS has been proven to bring a positive and significant contribution to the company's FP, indicates that getting a better OS can improve FP. The existence of foreign and institutional ownerships in Japanese companies align the conflict of interest between agent and principle and mitigate the agency problems. Darko et al. (2016) stated that the concept of corporate governance could mitigate agency problems. It has been approved to enhance the economic performance of U.S. restaurants (Madanoglu et al., 2018). A similar finding is found in Turkey when foreign ownership in the family business improved its ROA and Tobin's Q (Ciftci et al., 2019).

## **Learning for Indonesia**

Mulyani et al. (2016) stated that companies that developed from family businesses were still developing in Indonesia. Similarly, the implementation of corporate governance (which in research is embodied in a variable CC, BoD'

characters, and OS) has a direction. Even in the enterprise corporation, the family's dominance in the decision-making is listed on the Stock Exchange Indonesia. Articles are also explained that the family controls 67 percent of companies in Indonesia. Thus, the family becomes a factor necessary for decision-making businesses and reduces agency problems between owners and managers.

The model of the study proves that the OS contributes significantly to EP achievement in Japan. This study's data indicate that financial institutions dominate the OS of the sample companies. The image below shows that institutional finance's dominance within the structure finances is stable from year to year. Though so, the percentage of ownership of foreigners experienced an increase.

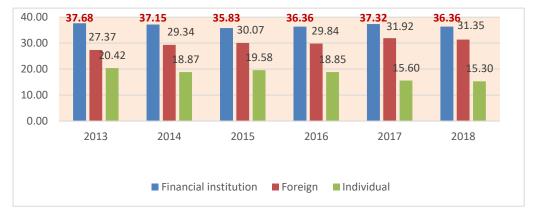


Figure 3
Results of Path Analysis

From the perspective of the institutional-based view of corporate governance, there are differences in who the parties contribute to surveillance and control of its management in Asia. In Indonesia, this role is carried out by the family. Meanwhile, in Japan, this role is played by financial institutions. The proportion of share ownership by families in Indonesian companies is significant. Likewise, in Japan, the percentage of share ownership by financial institutions is significant. The percentage of ownership which is great makes families and institutional finance having the authority as large and dominant shareholders determine the direction and control over management's performance

However, Jiang and Peng (2011) reminded that researchers and practitioners of corporate governance should develop a mechanism whereby legal and regulatory institutions significantly control management performance. This research is better than the researchers explaining why corporate governance in Asia is different from corporate governance practices in Europe or America. Researchers should not be trapped in developing a distinctive Asian character of governance (or Asian corporate governance), which is less productive and contributing. Statement Jiang and Peng (2011) the convincing research that the characters and the different OS between Japan and Indonesia, the common thread that can be drawn is that there is control of the shareholders on the EP at the corporate level. The difference is, Japan has

Environmental Accounting Guidelines, which regulate and provide guidance on how to implement environmentally sound business concepts, measure its performance, and report it to the public.

## **Reflections for Indonesia**

The Japan experience teaches Indonesia the following issues. First, the Ministry of Environment and Forestry needs to develop environmental conservation schemes and concepts implemented by Indonesian public firms. In this respect, environmental preservation represents efforts to prevent, reduce, and avoid environmental impacts, eliminate negative externalities, restoration in the event of a disaster. Meanwhile, environmental impacts refer to environmental burdens from business operations or other human activities and potential obstacles that can hinder the preservation of the right environment. Second, the Indonesian government must be able to explain the role and function of environmental accounting. In particular, they need to emphasize the role of internal environmental accounting in helping firms manage environmental conservation costs and analyze the costs of environmental conservation activities, which can then be compared with the economic benefits obtained. Internally, the technical guidelines must promote effective and efficient environmental conservation activities through appropriate management decisions. Further, external environmental accounting discloses and reports the results of environmental conservation activities quantitatively. The external functions includes providing information to stakeholders (consumers, business partners, investors, surrounding communities, and governments).

Third, the Indonesian government must develop applicable environmental accounting concepts for Indonesian public firms that include: environmental conservation costs (consisting of investments in equipment and systems for environmental management and conservation and environmental environmental conservation benefits (measured in physical units), and economic benefits from environmental conservation activities (measured in monetary units). Fourth, the Indonesian government must inform the elements of environmental conservation costs (costs to prevent, reduce, or avoid environmental impacts, eliminate environmental impacts, and post-disaster recovery). These costs include business area costs, upstream/ downstream costs, administration costs, research and development costs, social activity costs, environmental remediation costs, and other costs.

## CONCLUSIONS, LIMITATIONS, AND RECOMMENDATIONS

The study has found that corporate governance influences firms' environmental performacne through effective control and ownership structure. More extensive and better corporate control and ownership structure potentially improve environmental performance while boards of directors do not significantly affect environmental performance. Further, firms' environmental protection activities are not

affected by financial performance while environmental performance and ownership structure significantly affect competitive advantages. Better environmental performance can erode competitive advantages while bettere ownership structure improves competitive advantages.

This study's limitation is the relatively small number of samples, although the total observations are still adequate for statistical tests. The small number of samples results from the company's lack of obligation to submit environmental accounting reports. Ministry of Environment, The Japanese government, has guided procedures for calculating investment and financing activities that contribute to environmental conservation. However, the implementation is reminding voluntary. Based on this limitation, this study suggests further research be analyzed using qualitative methods, such as a content analysis of annual reports and online documents on the company website and followed by in-depth interview methods about Japanese company environmental performance policies to company managers to gain real-time information how and why the company enacted the environmental protection.

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