The Determinant of Sustainable Certification Adoption in Indonesia Palm Oil Industry

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ABSTRACT

The palm oil industry operational causes several debate, especially in environmental and social problems. Roundtable on Sustainable Palm Oil (RSPO) is presented as the institution that oversees sustainable development through the sustainable certification issued. The motivation of the adoption recently from the public pressure for palm oil companies to adopt this certification. However, this pressure is only the external factor to driven the sustainable development in palm oil companies. The internal factor from palm oil industry have not observed as the adoption of sustainable certification. Therefore, the purpose of this study is to examine the factors that affected the adoption of sustainable certification in palm oil companies by using binary logistic regression. We examined 14 financial reports of the Indonesia palm oil companies that go-public from 2014 until 2019. The results show that Return on Assets (ROA), Current Ratio, Firm Size, and Oil Extraction Rate (OER) not affect the adoption of RSPO. However, the Return on Equity (ROE), Debt to Equity Ratio (DER), and Export significantly influence the RSPO adoption by Indonesian palm oil companies. The internal factor, specifically in financial aspects be the main driver for adopting the sustainable certification. Therefore, the promotion of sustainable certification must lead on the growth of finance performance to maintain this adoption. The limitation of this research is only focused to listed palm oil companies in Indonesia.

1. INTRODUCTION

Indonesia is the largest palm oil producer in the world since 2004. Thus, the industry is very competitive in the global market [1]. The total export of Indonesian palm oil in 2018 is 30.3 million tons [2]. The palm oil industry also contributes significantly to social aspects through alleviating poverty and developing welfare for the wider community [3, 4]. Besides, the palm oil industry has the potential to provide large profits and create other derivative industry [5, 6]. Although the industry has a positive contribution, the palm oil operational activity is accused of the deforestation, water, land-use change, and social issues that could occur in the surrounding community [7, 8]. In addressing these issues, several regulations related to sustainability standards have been developed. The European Union only approves palm oil products that are suitable for sustainable development [9]. This regulation could create global pressure for the palm oil industry to support sustainable development [10]. The palm oil business is vulnerable to global vegetable oil trade competition and is under a considerable measure of worldwide pressure due to bad media attention and intensive mediatization. Therefore, academics, corporate organizations, communities, and government (the triple helix) are face a challenge for palm oil industry improvement that may affect their desire and capacity to compete in achieving shared value to fulfilment [11]. The oil palm companies implement sustainable development in their operational activities and growing environmental and social issues. Therefore, Roundtable on Sustainable Palm Oil (RSPO) is present as one of the global organizations that ensure sustainable development in the palm oil industry. The adoption of sustainable development based on global standards could play a fundamental role in contributing to organizational output legitimacy to produce sustainable results and impacts [12]. However, there was a decline in the performance of oil palm plantation companies. The implementation of sustainable development affected the loss of financial performance and is considered part of the corporate responsibility towards the environment [13]. Economic losses are expected from certification and membership costs, including consumers who could not pay an extra price for sustainable palm oil products. Therefore, it does not affect firm performance [14]. The problems lead to how the internal conditions could underlie oil palm plantation companies’ decision to adopt sustainable certification. The sustainable certification is the important criteria for attract an investor to palm oil stocks [15].

Firm has a several benefits, such as projected more outstanding sales, improved operations, improved morale for employees, and greater access to markets [16]. Thus, it can increase the performance of oil palm plantation companies. Therefore, compliance with global standards is an opportunity to develop the company’s competitive advantage. The adoption of sustainable certification could increase new market share in particular countries [17]. Based on the research gap, it was found that there are different impacts of RSPO adoption. Decision-making related to the adoption of
sustainable certification certainly requires an excellent financial estimation and prediction to improve its performance. Indonesia is the country that has an RSPO certified palm oil-producing country in the world [18]. This research aims to determine the factors that influence the adoption of sustainable certification by Indonesian palm oil companies, especially from an internal firm condition. The sustainable certification has been collected through financial report that listed in Indonesia Stock Exchange (IDX).

In general, the term sustainable term refers to companies' practice in acquiring profits by considering environmental and social issues. RSPO is a non-profit organization that integrates stakeholders from seven actors of the palm oil industry: producers of consumer pieces of stuff, traders and processors, retail, banking and investors, and Non-Governmental Organizations (NGOs), environmental preservation, and NGOs in the social field. RSPO develops sustainable standards based on global certification for palm oil with the purpose that palm oil companies can provide the profits without forfeit environmental and social aspects [19]. RSPO consist of eight (8) principles, which are 1) transparency commitment, 2) fulfillment with applicable laws and regulations, 3) long-term financial commitment and economic continuity, 4) optimum and appropriate implementation by the owner of palm oil companies, 5) environmental for responsibility and resources-biodiversity conservation, 6) deliberation of responsibility for workers, individuals, and communities influenced by the activities of palm oil plantations, 7) new plantings responsibility and development, and 8) commitment to constant refinement in areas. In principle, there are 43 criteria and 138 indicators to be tested on oil palm plantations.

A variety of conditions generally determines the adoption of sustainable certifications. Competitiveness, corporate culture, and public awareness positively influence sustainable practices in manufacturing companies [20]. Other findings indicate that consumers' signals create an influence on voluntary adoption of environmental certification and are followed by moral and ethical [21]. Organic product certification has a positive effect on the Return on Investment (ROI) in the scope of Ghana Farmers [22]. The previous research indicated that membership in farmer organizations, awareness of certification, and cocoa-producing households' size influence the adoption of sustainable certification [23]. Firm size, revenue, and gender of the owner-manager are linked to eco-certification [24]. Specifically, internal factors that influence the success of the RSPO adoption in oil palm smallholders are knowledge, directors' ability, farmer collaboration and information management, the appointment of farmer assistance, and benefits management in smallholder groups [25].

Based on previous studies, the palm oil companies have several factors that it considered a determinant in adopting the sustainable certification [26, 27]. The condition of internal companies is frequently associated with financial management and company activities. A higher financial ratio indicates the companies potentially make an investment, but the financial problems could disrupt the company's investment process [28]. Commonly, the company's investment activities can improve product quality through decision support system (DSS) implementation [29, 30], and also by implementing certification [31]. Whereas related to production activities, certification could create high product competitiveness and a company's position in the global market. The company's profitability variables revealed a positive impact after firms applied for sustainable certification, while the market benefit variable showed gradual improvements after obtaining the certification [32, 33].

The RSPO adoption establishes a premium price on Crude Palm Oil (CPO) products [34]. It has the potential to create profits for the company. The Sustainable Certified CPO Products could increase market share for countries that require RSPO certification [17]. However, there is no difference in profitability between companies that adopt RSPO and companies that do not adopt RSPO [35]. Instead of it, other findings state that the adoption of sustainable certification could create profitability for companies [36]. The implementation of RSPO requires a massive cost and implicates economic losses for the company [14].

2. METHODOLOGY

The material in this research is compiled from financial report of oil palm plantation companies in Indonesia, which are registered on the IDX in 2014 to 2019. The number of samples in this research are 14 palm oil companies listed in IDX. There are limited data on the financial reports. Data collection based on secondary data, such as research and scientific articles, statistical reports and books. RSPO is a voluntary certification for palm oil industry, therefore it is necessary to discuss how internal company could influence the adoption of the certification. This study applied a logistic regression through common effect model to observe the determinants of the RSPO adoption by Indonesian oil palm companies. The dependent variable in this study involved RSPO adoption. Whereas, the independent variables are Return on Assets (ROA), Return on Equity (ROE), leverage, Current Ratio (CR), firm size, and Oil Extraction Rate (OER). The model was developed as follows:

$$ S_{t} = \alpha + \beta_{1}ROA_{t} + \beta_{2}ROE_{t} + \beta_{3}CR_{t} + \beta_{4}LEV_{t} + \beta_{5}SIZE_{t} + \beta_{6}OER_{t} + \epsilon_{t} \quad (1) $$

where, $S_{t}$ is the sustainable certification, adopting by firm $i$ and period $t$, $ROA_{t}$ is a profit divided by total assets in firm $i$ and period $t$, $CR_{t}$ is a measure of the liquidity ratio obtained from current assets divided by current debt in firm $i$ and period $t$, $ROE_{t}$ is a profit divided by total equity in firm $i$ and period $t$, $LEV_{t}$ is a capital structure of a firm which uses total debt divided by total equity in firm $i$ and period $t$, $SIZE_{t}$ is the size of a firm that is represented by total assets with logarithm natural in firm $i$ and period $t$, $OER_{t}$ is the oil extraction rate in firm $i$ and period $t$, and $\epsilon_{t}$ is an error rate.

ROA and ROE used in this study as a measurement of returns on the total assets and equity. The decision to create an innovation highly depends on firm equity [37]. High returns could create large company capital in the future and be diverted to develop products. The adoption of the RSPO is one of the options that could be taken to increase the new market share of a company [17]. There is the financial indicator that sufficiently impacted, which is the current ratio. The ratio shows the good financial performance of the company. Companies with high liquidity could have a higher chance to develop their products [38]. The product developments in the oil palm environment are conducting sustainable certification. Therefore, there is an impact between the current ratio and RSPO adoption. The capital structure of this study is represented by the DER variable. Other findings show that the
adoption of sustainable certification depended on the capital structure [39]. There is an impact of DER on the adoption of RSPO on oil palm plantation companies in Malaysia [27].

Capital structure is the use of assets and funds sources by companies to increase the profitability of potential shareholders. Large debt capacity compared to company capital could create difficulty for companies to develop the product capabilities of the company [40, 41]. Therefore, the capital structure based on debt is tend to detain the adoption of the RSPO. The size of the company is taken as one of the independent variables in this study. The quantity of the product should be balanced with the quality of the product to absorb the needs of the overall market share. However, the company has a large asset would undertake the innovation for the products by developing the quality of the products through certification [42, 43]. Within the scope of oil palm companies, the sustainable certification could be an alternative despite this brings the additional cost. However, large companies tend to adopt sustainable certification. CPO extraction rate determine as an operational process to convert Fresh Fruit Bunches (FFB) to CPO [16]. Higher CPO extraction rates could be defined as a better managerial efficiency in oil palm companies and creates their perception that the need for certification will increase [27]. Based on the description of each variable, the hypothesis is developed in this study as follows:

H1. Return on Assets (ROA) affects the RSPO adoption in oil palm companies

H2. Return on Equity (ROE) affects the RSPO adoption in oil palm companies

H3. Current Ratio affects the RSPO adoption in oil palm companies

H4. Debt to Equity (DER) affects the RSPO adoption in oil palm companies

H5. The firm size affects the RSPO adoption in oil palm companies

H6. The CPO extraction rate affects the RSPO adoption in oil palm companies

The definition in independent and dependent variables are provided in Table 1, respectively

Table 1. Variable measurements

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC</td>
<td>A dummy variable which take the value of “1” if the firm’s adopted a sustainable certification, “0” otherwise</td>
</tr>
<tr>
<td>ROA</td>
<td>Return on assets, computed by dividing a net income in firm’s by the average of firm’s total assets</td>
</tr>
<tr>
<td>ROE</td>
<td>Return on equity, computed by dividing a net income in firm’s by the average of firm’s total equity</td>
</tr>
<tr>
<td>Current Ratio</td>
<td>The firm’s current ratio computed by dividing as the current assets to current liabilities. [27]</td>
</tr>
<tr>
<td>DER</td>
<td>The firm’s total debt ratio computed by dividing as the total debt in firm’s to total equity</td>
</tr>
<tr>
<td>Size</td>
<td>The natural logarithm of the firm’s total assets</td>
</tr>
<tr>
<td>OER</td>
<td>The CPO extraction rate in firm’s annual report</td>
</tr>
</tbody>
</table>

3. RESULTS

The descriptive analysis applied in this study, as could be explained in Table 2. The descriptive table performed the analysis by displaying the mean and standard deviation of the independent variables in all oil palm companies in Indonesia.

The descriptive analysis results show that data from oil palm companies in Indonesia have a high difference value except for size and OER. Both of these variables have a small standard deviation value compared to the mean value. The higher mean in the research variables is:

Table 2. Descriptive analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>84</td>
<td>0.27</td>
<td>10.44</td>
<td>-58.3</td>
<td>18.3</td>
</tr>
<tr>
<td>ROE</td>
<td>84</td>
<td>5.76</td>
<td>47.11</td>
<td>-134.2</td>
<td>350.2</td>
</tr>
<tr>
<td>Current Ratio</td>
<td>84</td>
<td>1.33</td>
<td>1.14</td>
<td>0.11</td>
<td>5.21</td>
</tr>
<tr>
<td>DER</td>
<td>84</td>
<td>0.71</td>
<td>5.56</td>
<td>-46</td>
<td>10.2</td>
</tr>
<tr>
<td>SIZE</td>
<td>84</td>
<td>16.10</td>
<td>0.76</td>
<td>14.5</td>
<td>17.4</td>
</tr>
<tr>
<td>OER</td>
<td>84</td>
<td>22.12</td>
<td>1.08</td>
<td>19.9</td>
<td>24.5</td>
</tr>
</tbody>
</table>

The result of logistic regression is presented in Table 3. It explains that the regression model is appropriate with a probability Chi-Square above 5% or 0.05, hence that the model is declared fit. ROE, Current Ratio and DER affected the adoption of sustainable certification in period from 2014 until 2019. Moreover, ROA, SIZE and OER are not influenced.

Table 3. Logistic regression

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficients</th>
<th>Std Err.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-5.31</td>
<td>9.18</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.19</td>
<td>0.12</td>
</tr>
<tr>
<td>ROE</td>
<td>0.17***</td>
<td>0.06</td>
</tr>
<tr>
<td>Current Ratio</td>
<td>0.70*</td>
<td>0.37</td>
</tr>
<tr>
<td>DER</td>
<td>1.27***</td>
<td>0.48</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.58</td>
<td>0.38</td>
</tr>
<tr>
<td>OER</td>
<td>-0.27</td>
<td>0.28</td>
</tr>
<tr>
<td>Prob. Chi-Sq</td>
<td>0.781</td>
<td></td>
</tr>
<tr>
<td>Log likelihood</td>
<td>-38.91</td>
<td></td>
</tr>
<tr>
<td>McFadden R-Squared</td>
<td>0.296</td>
<td></td>
</tr>
</tbody>
</table>

Based on Table 3, this study found that ROA and OER, had no effect on the adoption of sustainable certification. The two variables can be considered as a measure of operational performance. Hence, oil palm companies continue to operate well, even though the company does not take this certification. The findings also show that firm size has no effect on the adoption of RSPO. The average of firm size of oil palm companies shown similarities, so that almost all of the oil palm companies have large assets. This finding is different from several previous studies [44, 45].

The results shows that consideration of Indonesia palm oil companies to follow sustainable certification is based on three financial ratios. There are a positive impact and significance from ROE and Current Ratio. ROE can be described as a proxy of performance of oil palm companies [35]. On the other hand, current ratio is proxied as the performance of liquidity. A high level of profitability and liquidity can make it easier for oil palm companies to have additional capital. ROE can be an assessment for an investor to provide capital and has implications for adopting sustainable certification. Besides, high ROE value means the palm oil company can improve the firm performance and reach competitive advantage by innovating in technology or joining a sustainable certification. These results support some of the literature related to the effect of firm profitability on decisions to adopt certification [32, 33, 46].

The other findings in Table 3 indicate that DER has a positive effect and significance on RSPO adoption. The high
of the DER value shows that the company is conducting investment activities to increase sales [44]. Oil palm companies have the potential to receive profits from the selling price. However, the palm oil companies must have large capital to participate in the certification [13]. These findings are similar with the findings of previous studies by Tey et al. [27].

Furthermore, the Global pressure serves as a fain mechanisms due to mandatory returns for exporters who do not meet international criteria [47, 48]. Oil palm companies in Indonesia need to implement a sustainable aspect through the adoption of sustainable certification, which to tackle environmental issues from foreign consumers to increase their sales. International certification can increase the legitimacy of companies to gain the trust of palm oil importing countries [45, 49]. Figure 1 shows that the level of CPO exports in Indonesia is high in international markets, especially the European Union which requires sustainable certification as a reservation for palm oil to enter their market.

Based on McFadden R-Squared, the strength of the factors identified in this research can be influence the adoption of sustainable certification is 29.6%. The results show there are other variables with 71.4% in outside the research that could determine RSPO adoption. Moreover, this research gains some financial variables due to the stable financial performance in company able to adopt the sustainable certification. A palm oil company that sought to implement sustainable palm oil practices discovered that the expenditures were more than the income potential [50]. Thus, the sustainable certification refers to corporate responsibility for environment and society. Although smallholders in Indonesia are involved in operational process, the oil palm company has an important role to ensure that smallholder groups could be implemented. Moreover, the research related sustainable certification in corporate scopes is necessary due to implication on firm performance [51].

There is a theoretical contribution in this research to develop literature related to the RSPO adoption in Indonesian oil palm companies’ scope, especially from the perspective of the company’s internal conditions, considering that the market share of Indonesian palm oil companies is mostly from countries that require sustainable certification. This research implies that palm oil companies in Indonesia continue to adopt sustainable certification, based on high profitability, liquidity and leverage. There are suggestions for future research includes:

1. The addition of other variables from non-financial conditions.
2. The enlargement of the research observations.
3. Future research can observe the other certification determinants in oil palm companies in Indonesia except sustainable development aspects.
4. The other technique approaches need to be resolved to obtain accurate results in future research.

REFERENCES


4. CONCLUSIONS

This study aims to determine the adoption of the sustainable certification in Indonesian Palm Oil Companies in 2014-2019. This research findings show that the adoption of RSPO is not influenced by ROA, firm size, and OER. However, the results found that ROE, Current Ratio, and DER had an impact on sustainable certification adoption. This research also provides empirical evidence that other variables outside the research could determine RSPO adoption.

Figure 1. Indonesia CPO export destination (Million Tons)

Source: Bureau of Central Statistics [52]


