

DIFFERENCES IN SUSTAINABLE DEVELOPMENT INDICATORS BETWEEN PALM OIL COMPANIES IN INDONESIA AND MALAYSIA

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Abstract. *This study aims to analyze the difference in sustainable development indicators of palm oil companies in Indonesia compared to Malaysia. Sustainable development requires companies to consider corporate performance goals in three dimensions, environmental, economic, and social. Palm oil companies in Indonesia and Malaysia need to pay attention to indicators in sustainable development. In determining sustainable development indicators, sometimes between one country and another country has differences. The palm oil industry in Indonesia and Malaysia has been hit by controversies over deforestation resulting in high carbon content, endangering wildlife and threatening biodiversity. This can affect the sustainable development goals. For this reason, it is necessary to analyze whether there are differences in sustainable development indicators of palm oil companies in Indonesia compared to Malaysia. Synergy between environmental protection, economic growth, and social security for the world is needed. The population in this study is palm oil companies listed on the Indonesia Stock Exchange and Bursa Malaysia for the 2019-2021 period. The sampling technique in this study used purposive sampling techniques and obtained samples of 45 companies. The data analysis used is an independent sample t-test with SPSS software tools. The results showed that there was no difference in sustainable development indicators in Indonesian and Malaysian palm oil companies. Both countries have taken the same path in realizing sustainable development.*

Keywords: *Sustainable Development, Palm Oil Company, Indonesia, Malaysia*

1. INTRODUCTION

Palm oil companies in Indonesia and Malaysia are the world's largest producers of palm oil. Palm oil products are a global necessity, almost every food, cosmetics, cleaners, fuels and candles contain palm oil. Oil palm is a crop with an ever-high demand for palm oil in the world (Sayer et al., 2012). Indonesia has been the world's largest producer and exporter of palm oil since 2008 (Feintrenie et al., 2010). World demand for vegetable oils increased in the 1990s and substantially influenced plantation expansion in Indonesia, as it has been considered very profitable (Sayer et al., 2012). As of 2009, total plantations cover about 7 million hectares and reached 7.8 million hectares in 2010. Large-scale plantations have a proportion of large-scale plantations to smallholders of 60% to 40% respectively. Areas for oil palm plantations are mostly allocated in Kalimantan and the island of Sumatra and most recently Papua (Obidzinski et al., 2012). To date, palm oil has been a substantial Indonesian agricultural commodity in terms of contribution to national income. This is in line with one of the major palm oil producers and exporters, the palm oil industry in Malaysia which contributes around 37.9% of the country's gross national income (GDP) through the agricultural sector (Ngan et al., 2022). However, the palm oil industry in Indonesia and Malaysia has been beset by controversies over deforestation that produces high carbon content, endangers wildlife and threatens biodiversity. Oil palm plantations are also considered environmentally unfriendly which causes plantation areas to experience water shortages. In addition, issues surrounding the palm oil industry have led major palm oil importing countries such

as the European Union to declare palm oil unsustainable and thus will be removed from the transportation sector by 2030 (Indriyadi, 2022).

The issue of environmental pollution has sounded the alarm for the sustainable development of palm oil companies in Indonesia and Malaysia. This is evidenced by the State continues to disseminate laws and regulations on environmental protection, and the public is increasingly paying attention to environmental protection. Globally, sustainable development is a concern at the national level. On the one hand economic growth, the depletion of non-renewable resources leads to fuel and energy shortages, which contribute to environmental damage, increasing natural disasters. By integrating sustainable development into economic growth, environmental protection, and social security have become urgent needs for the world.

Sustainable Development refers to Law No. 32 of 2009 concerning environmental protection and management. This sustainable development is measured by the company's sustainable development system evaluation index which consists of three aspects, namely business sustainability, environmental sustainability and other sustainability elements. For the aspect of business sustainability, it must have three indicators, namely development ability, corporate culture and operating ability. For environmental sustainability, there must be three indicators, namely inputs to environmental protection costs, pollutant emissions, and product impacts on the environment and finally, other sustainability aspects must have three indicators, namely human rights, the ability to innovate sustainably and the efficiency of resource utilization.

Debating the sustainability of the palm oil industry, Indonesia has embraced multifunctional agriculture demanding that agriculture needs to meet environmental performance such as the Corporate Performance Rating Assessment Program in Environmental Management (PROPER). Indonesia and Malaysia also joined the voluntary certification of the Roundtable on Sustainable Palm Oil (RSPO) and established Indonesian Sustainable Palm Oil (ISPO) certification for Indonesia and Malaysian Sustainable Palm Oil (MSPO) certification for Malaysia its own mandatory for palm oil companies, although this sustainability certification was considered problematic and ineffective in some studies such as research Morgans et al., (2018) found that in Kalimantan (Indonesia) it is not there are significant differences between RSPO and non-RSPO plantations in terms of sustainability metrics. However, it found that certified farms tended to achieve greater returns in terms of profitability or profitability. Furthermore, Astuti and Nugroho (2016) stated that companies must see a new side of corporate responsibility as a result of the impact of company performance so that the company's existence can survive and be long-term and sustainable compared to only looking for short-term profits or profitability. Therefore, this study aims to analyze the differences in sustainable development indicators between palm oil companies in Indonesia compared to Malaysia so that the implications of this study will pay more attention to indicators related to sustainable development so that palm oil companies in Indonesia and Malaysia can provide accountability for all social, economic, and environmental activities carried out by palm oil companies to All stakeholders are in accordance with the legislation, thus accelerating the implementation of sustainable development.

2. LITERATURE REVIEW

The term triple bottom line was popularized by Elkington (1998), that companies that want to be sustainable must pay attention to the 3Ps (profit, people, and planet). In addition to pursuing profit, companies must also pay attention to and be involved in fulfilling the welfare of the community (people), and actively contribute to preserving the environment (planet). In this idea, companies are no longer faced with responsibilities based on a single bottom line, namely economic aspects that are reflected in their financial condition only, but must also pay attention to social and environmental aspects (Wibisono, 2007). This concept is the basis of sustainable development thinking. Sustainable development is a concept that explores the relationship between economic development, environmental quality and social justice (Rogers et al., 2010). Sustainable development basically includes three dimensions namely economic, social and environmental. In the economic dimension, there are several goals to be achieved,

including efforts to increase economic growth, fight poverty, and change production and consumption in a balanced direction. While the social dimension is related to solving population problems, improving community services, improving the quality of education, and others. The environmental dimension has objectives including efforts to reduce and prevent pollution, waste management and conservation or preservation of natural resources. Thus, the sustainable development goals focus on the three dimensions above, namely the sustainability of a high economic growth rate (economic growth), the sustainability of social welfare that is fair and equitable (social progress) and ecological sustainability in a harmonious and balanced life system (ecological balance) (Pertiwi, 2021).

One of the most important industries of Indonesia and Malaysia is the palm oil industry. This is due to the high demand for these palm oil products. Deforestation is one of the biggest environmental problems facing Indonesia and Malaysia today. These concerns have led to the establishment of the Roundtable on Sustainable Palm Oil (RSPO). RSPO is an international certification scheme and standard initiative that promotes sustainable commodity production. (Hsu & Perry, 2015). However, in the end, industry groups in Indonesia and Malaysia have disagreements with the RSPO (Lingyu, 2021). Therefore, both States initiated their respective national certification schemes. In 2011, the Indonesian Sustainable Palm Oil (ISPO) standard was born. Four years later, Malaysia launched the equivalent Malaysian Sustainable Palm Oil (MSPO) standard. Later, the two countries began campaigning globally to win recognition of the standard, with the right to define sustainable palm oil in their own way.

In Indonesia, according to Law Number 32 of 2009 concerning environmental protection and management, sustainable development is defined as a conscious and planned effort that integrates environmental, social, and economic aspects into development strategies to ensure the integrity of the environment as well as the safety, ability, welfare, and quality of life of present and future generations. ISPO which was made a regulation in 2011 is contained in the Regulation of the Minister of Agriculture (Permentan) No. 19 of 2011 concerning Guidelines for Sustainable Palm Oil Plantations which defines sustainable development as a business system in the field of oil palm plantations that is economically viable, socially feasible, and environmentally friendly based on the prevailing laws and regulations in Indonesia. Furthermore, in 2015 Permentan No. 19 of 2011 was revoked and replaced by Regulation of the Minister of Agriculture (Permentan) No. 11 of 2015 concerning the Palm Oil Certification System which was then updated again in 2020 in the Regulation of the Minister of Agriculture (Permentan) Number 38 of 2020 concerning the Implementation of Plantation Certification. The issuance of Minister of Agriculture Regulation 38 of 2020 is the agency's response to implement the provisions in article 10 article 1 and regulations regarding guidance and supervision of the implementation of ISPO certification as regulated by Presidential Regulation Number 44 of 2020 concerning the Indonesian Sustainable Palm Oil Plantation Certification System. ISPO principles include the legality of plantation business; plantation management; protection of primary natural forests and peatlands; environmental management and monitoring; responsibility towards workers; social responsibility and economic empowerment of the community and continuous business improvement.

In Malaysia, supporting sustainable development in the palm oil industry is known as the MSPO certification system. MSPO principles include general principles for oil palm plantations and general principles for organized smallholders. Each of these general principles is divided into 7 principles, including: commitment and responsibility of the management; transparency; compliance with legal requirements; social responsibility, health, safety and working conditions; environment, natural resources, biodiversity and ecosystems; best practices; construction of new plantings.

More specifically, environmental sustainability practices in Malaysia involve several dimensions of environmental conservation with its factors, such as ownership of MSPO (Malaysian Sustainable Palm Oil). environmental legislation compliance with international standards (ISO 14001), green policy (KETTHA), Malaysian standards and regulations, carbon footprint labeling policy, waste management and pollution control

with best logistics, life cycle assessment (LCA), GHG emissions, technological advancements with waste treatment, and energy generation (Begum et al., 2019).

Based on the description above, the palm oil industry is moving towards sustainability, but in both countries there are different indicators in sustainable development because each country has its own standards. From the description above, the hypothesis built is as follows:

H1: Differences in Sustainable Development Indicators Between Palm Oil Companies in Indonesia and Malaysia

3. RESEARCH METHODS

This research is descriptive quantitative. The research data is in the form of secondary data sourced from annual reports and sustainability reports for 2019-2021 of palm oil companies listed on the Indonesia Stock Exchange (IDX) and Bursa Malaysia. A total of 45 palm oil companies were sampled in this study, including 17 palm oil companies in Indonesia and 28 Malaysian palm oil companies. Sample selection is done by purposive sampling. This study used another test conducted with the SPSS software tool version 28, namely by looking at the results of the independent sample T-test. The independent sample T-test is applied to determine the difference in sustainable development indicators of palm oil companies in two countries, namely Indonesia and Malaysia.

Sustainable development indicators in this study refer to Begum et al., (2019). Sustainable development whose composition is measured from Environment sustainability practices (ENVSP), Economic sustainability practices (ECSP) and Social sustainability practices (SSP). For each of these components has 5 indicators so that there are 15 indicators to measure sustainable development. Here is a table of sustainable development indicators:

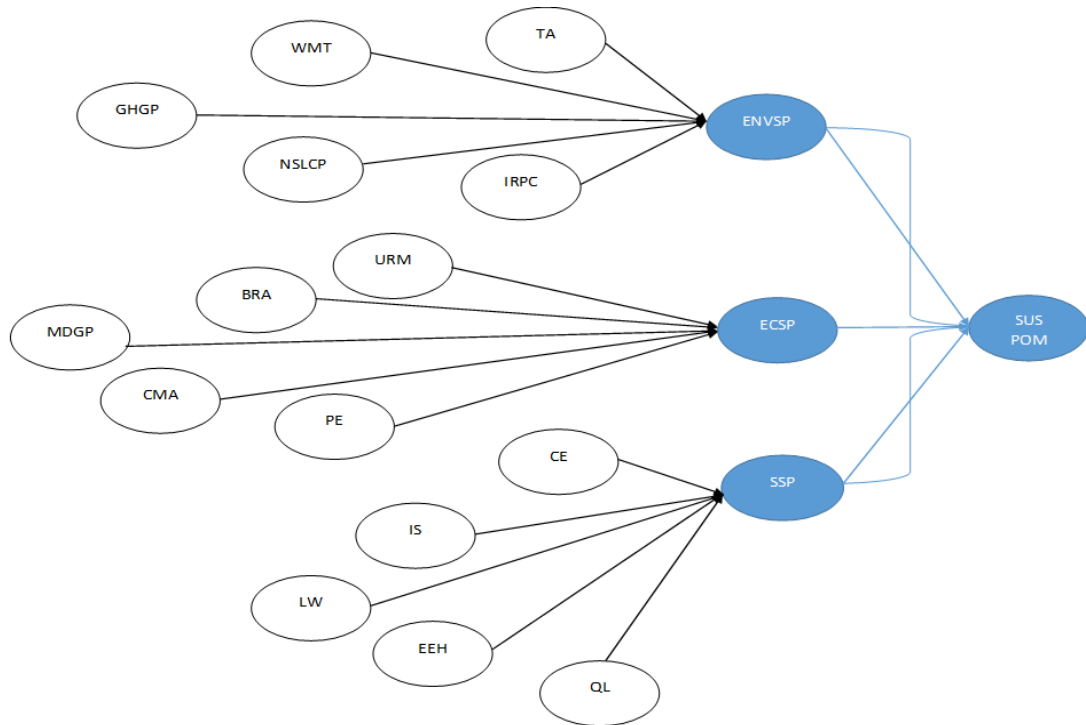
Tabel 1. Palm Oil Sustainable Development Indicators

No.	Item	Item definition
	SUS POM Sustainability palm oil milling	A key component of sustainable milling is that it uses processes that minimise negative environmental impacts, as well as conserve energy and natural resources. Such processes are safe for employees, consumers, and communities. These are also economically sound, balancing environmental, economic, and social objectives, and play an important role for manufacturing organisations in times of economic turmoil.
	ENVSP Environment sustainability practices	Environmental sustainability means, in terms of POM, the consciousness of ecological conservation for human well-being and economic growth during processing with the technology and regulatory policies.
1.	TA Technological advancement	Likewise, the latest palm oil milling technology puts greater emphasis on waste to profit technology, energy productions, end of pipe technology, and new cleaner production technology.
2.	WMT Waste management treatment	In a production company, WMT should be properly treated with cleaner technology for environmental conservation and economic utilisations. The success of WMT allows for better re-using, reducing, and recycling of the materials.
3.	GHGP Greenhouse gas emission and pollution control activity	The GHGPs aim to reduce greenhouse gas emission rates, including carbon dioxide, steam, methane, and nitrous oxide.
4.	NSLCP	There are NSLPCs or protection acts and standards strongly governed by MPOB, new Malaysian sustainable palm oil

	National, state, and local policies	(MSPO) policies, national green manufacturing practices (GMP), the environment and quality act (EQA), national green policies and acts, Standard and Industrial Research Institute of Malaysia (SIRIM), state and local authority acts such as the Department of Environment (DOE) and Depart of Occupational Safety and Health (DOSH) and Indonesian Sustainable Palm Oil (ISPO)
5.	IRPC International regulatory policies and compliances	IRPCs are implemented by international standards and compliances such as the Dow Jones sustainability index, roundtable on sustainable palm oil (RSPO), and certified sustainable palm oil (CSPO) policies, and environment management system (EMS) requirement.
	ECSP Economic sustainability practice	Economic sustainability production practices can serve as a driver to improve production efficiency, which will lead to profitability and higher efficiency of utilisation of biomass, fuel, and electricity. It can reduce the cost of manufacture and implement green initiatives for sustainability, in order to create new business opportunities through branding, reputation, and advantages.
6.	URM Utilization of resources and material	URM shows how profitable and productive the available resources and materials, such as wastage of CPO among POMs, are used to obtain the highest benefit from their consumption
7.	BRA Brand reputations and advantage	The BRA dimension is about the brand image, quality of products and service, and product awards and customer satisfaction rate. It measures the level of quality of the company.
8.	MDGP Market demand growth and pricing policies	The palm oil industry could achieve economic growth along with the development of greener production processes through the implementation of cleaner production and higher utilisation efficiency of fuel, electricity, and labour, which suggests improving the operation for cleaner technology and lower production cost.
9.	CMA costs of milling activity	CMA shows the cost related to the manufacturing activities, including warehousing, inventory, procurement, transportation, and customer service.
10.	PE Production efficiency	The POM sector defines PE as increasing CPO and CPKO productions, and reverse logistics support.
	SSP Social sustainability practices	Social sustainability practices refer to the achievement of labour welfare, community well-being, employee equity, human resource development, secure infrastructure facilities, and enhancement of the quality of life for workers.
11.	CW Community well-being	Adopting food safety and hazard analysis and critical control points (HACCP) policy as per ISO 22000, as the best developed practice for the palm oil industry, is beneficial for CW.
12.	IS Incentives structure	The IS dimension includes the employee's rights to good wages, safe working places, rewarding facilities, sufficient infrastructure, and procurement justice.
13.	EW Employee welfare	The EW dimension shows how the companies improve the physical environment for workers. The safety of employees and local people leads to a decline in accident rate, number of injuries, and occupational illnesses.

14.	EEH Employee Equity and Human Resource Development	The EEH dimension measures the equal opportunity of employment practice, including gender equality, wages per person, task per person, compulsory labour, and ethical trading.
15.	QL Quality Of Life	The QL dimension measures the employment related social welfare, training, and educational opportunity.

So the conceptual framework of sustainable development is as follows:



Sumber: Begum et al., (2019)

When the company does not disclose one of these indicators, it will be given a score of 0, when the company reveals 1 indicator it is given a score of 1, when the company reveals the 2 indicators it is given a score of 2, when the company reveals the 3 indicators it is given a score of 3, when the company reveals the 4 indicators it is given a score of 4, when the company reveals the 5 indicators it is given a score of 5 and so on. Next, the total score is divided by the total indicators. For example, if one company only has 3 indicators, then a sustainable development value of 0.2 obtained from 3/15 and so on will be searched for sustainable development values for 45 companies sampled in this study. To measure such indicators, a method of content analysis with the formula is used:

$$ISD = \frac{\sum_{i=1}^n sp}{n}$$

Information :

ISD	= Enterprise sustainable development index
$\sum_{i=1}^n sp$	= Number of companies' sustainable development practices
n	= The number of items for the enterprise amounted to 15 indicators

4. RESULTS AND DISCUSSION

The quantitative approach in this study was carried out through descriptive analysis using SPSS 28 software. The table below shows the results of descriptive tests, namely the amount of data, mean values and standard deviations from each country.

Tabel 2. Descriptive Group Statistics of independent sample T-test

No	Criteria	N	Mean	Std. Deviation
1	Indonesia	51	0.727	0.2192
2	Malaysia	84	0.739	0.2089
	Jumlah	135		

Based on the SPSS output in the table above, the mean value in Indonesian data is 0.727 and Malaysian data is 0.739. This value means that the average in sustainable development in Indonesia is 0.727 and the average in sustainable development in Malaysia is 0.739. Thus it can be said that the intermediate rate of sustainable development in Malaysia is higher than sustainable development in Indonesia although not very large.

The results of hypothesis testing are carried out by looking at the probability value which is smaller than 0.05 using SPSS, the statistics are shown in the following table:

Tabel 3. Different Test Results Independent Sample T Test

No	Kriteria	Levene's Test for Equality of Variances		t-test for Equality of Means			
		f	Sig	T	df	Significance	
						One-Sided p	Two-Sided p
1.	Equal Variance Assumed	0.146	0.703	- 0.313	133	0.377	0.755
2.	Equal Variance Not Assumed			- 0.310	101.710	0.379	0.757

Based on the results of the calculation of the difference test, the two average data presented in the table above are known in the column Levene's Test for Equality of Variances to have a significance value of 0.703 ($p > 0.05$). This shows that both variances are equal, so the use of variance to compare population averages (t-test for Equality of Means) in T-test testing must be on the basis of equal variance assumed. In equal variance assumed obtained a t value of -0.313 and a significance level $p = 0.755$. The results show that $p > 0.05$, means that there is no significant difference between the sustainable development of palm oil companies in Indonesia and Malaysia. It can be said that oil palm plantation companies in Indonesia and Malaysia have the same goal to realize sustainable oil palm plantations by taking into account economic, social and environmental dimensions.

In the analysis of the Independent Sample T-test, the significant value of 0.755 between sustainable development in Indonesia and Malaysia is > 0.05 meaning that it does not pass the significance test at the level of 5%, indicating that there is no difference in sustainable development in Indonesia and Malaysia so that the H1 hypothesis is rejected. Specifically, sustainable development in Malaysia and Indonesia, has taken the same path with similar results, both of which have sought to address environmental issues in the oil palm plantation industry. This is supported by the results of descriptive statistical analysis in the difference test in table 2 which shows the results that between palm oil companies in Indonesia and Malaysia there is no difference or in the sense that they both show the same mean or average value in carrying out sustainable development.

Sustainable development not only focuses on generating economic benefits, but also provides social benefits and ecological benefits across generations (Judit, 2013). Sustainable development is relative and specific. Related to the dimension of sustainable development, the development of oil palm plantations in Indonesia and

Malaysia includes three important pillars, namely sustainability in economic, social, and ecological dimensions. Purba and Sipayung, (2017) documented that oil palm plantations contribute, both economically, socially, and environmentally, to the achievement of the Sustainable Development Goals (SDGs).

The results of this study support the research of Hsu and Perry (2015); Rice (2019); and Yodha (2018) regarding sustainable development in Indonesia and Malaysia there is no difference, both countries have the same goal to realize a sustainable palm oil industry. Purba and Sipayung (2017) documented that the contribution of the palm oil industry in the economy includes encouraging economic growth (national and regional), foreign exchange sources, and state income, while in social aspects, among others, in rural development and poverty reduction. The ecological role of oil palm plantations includes preserving carbon dioxide and oxygen cycles, restoring degraded land, conserving soil and water, increasing biomass and carbon land stocks, and reducing greenhouse gas emissions/peatland restoration. With this comprehensive paradigm, the palm oil industry continues to grow in a sustainable perspective.

CONCLUSION

This study aims to analyze the differences in sustainable development indicators in oil palm plantation companies listed on the Indonesia Stock Exchange (IDX) and Bursa Malaysia in 2019-2021. Based on the results of the evaluation of research models and methods as well as testing the hypotheses assumed by this study, it was concluded that there is no difference in sustainable development in Indonesia and Malaysia. Specifically, sustainable development in Malaysia and Indonesia, has taken the same path with similar results, both of which have sought to address environmental issues in the oil palm plantation industry. Sustainable development not only focuses on generating economic benefits, but also provides social and ecological benefits across generations.

Based on the results and limitations of the study, recommendations for the development of this research in the future, need to reexamine the consistency of the findings of this research by developing and adding other sustainable development indicators such as indicators from the Global Reporting Initiative (GRI). Future research can also be carried out by adding samples and expanding research objects other than palm oil companies.

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