

Communicating Sustainable Brand Equity in a High Carbon Footprint and High-Risk Sector: Comparing Malaysia and Indonesia Oil and Gas Industry

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Article

Communicating Sustainable Brand Equity in a High Carbon Footprint and High-Risk Sector: Comparing Malaysia and Indonesia Oil and Gas Industry

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Abstract: The oil and gas industry is classified as a high carbon footprint and high-risk sector from the sustainable development perspective. Its operational activities risk potential threats to the environment and the local community. Globally, there are multiple cases of local community discontent towards oil and gas operations in their area. Consequently, the oil and gas industry shifted into corporate social responsibility (CSR) activities to indicate their dedication to sustainability. Studies have been conducted to investigate the impact of CSR activities on the oil industry. However, there is still limited research looking into sustainable brand positioning, which might be affected by the execution of multiple CSR programs by the industry. Looking into the oil and gas industry in Malaysia and Indonesia, this study compared the industry's sustainable brand positioning amongst the local community. By adopting Aaker's brand equity model, this study investigated the effect of sustainable brand awareness, the perceived quality of sustainable initiatives, brand association, and brand loyalty on sustainable initiatives towards sustainable brand equity. There are 448 respondents involved from both Malaysia and Indonesia. Using PLS-MGA, this study identified that brand loyalty on sustainable initiatives and brand association are significant predictors of sustainable brand equity. Findings from this study also indicate that no group (i.e., Indonesia and Malaysia) is significantly larger than one other in the path coefficient score. However, using an independent sample t-test, the study indicates that the oil and gas industry has better sustainable brand positioning amongst Malaysia's local community than Indonesia.

Keywords: sustainable branding; CSR; oil and gas; communication; local community; high carbon footprint; high-risk industry; PLS-MGA; Malaysia; Indonesia



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1. Introduction

Sustainable development is the pinnacle approach to growth and development in various sectors throughout the market economy. The rising concern by consumers and multiple campaigns from different parties has resulted in industries shifting their concept of development from normal development that prioritises profit and losses to sustainable development that considers every aspect before making any decision [1]. One of the major industries associated with sustainable issues is the oil and gas industry. The industry is considered a high carbon footprint sector where its production processes are related to

producing a harmful effect on the environment [2]. According to the McKinsey report in 2020, the industry is responsible for 9% of total human-made greenhouse gas (GHG) emissions [3]. Thus, it is unsurprising for the oil and gas industry to develop a focus towards sustainable development in its sectors. However, the vital question is how the oil and gas industry can tap into sustainable development when its primary business involves producing materials that contribute to environmental issues such as greenhouse gases and carbon footprint. Multiple initiatives have been undertaken, such as embarking on a Corporate Social Responsibility (CSR) Programme [4].

The CSR initiatives involve multiple areas, including environmental, social, and community development. Not only that but the initiatives are also conducted with the collaboration of multi-stakeholders, including government, local communities and non-government organisations (NGOs). For instance, a study conducted in Norway indicated that the local oil and gas industry and its CSR programme had benefited the local communities, especially in generating economic value [5]. Similarly, other countries report active CSR programmes initiated by the oil and gas industry, including Ghana and Malaysia [6,7]. However, despite that, the oil and gas industry is under constant allegations of using the CSR programme to sugar-coat their non-sustainable activities. The situation is known as greenwashing or astroturfing, where the corporation uses the good initiative as a veil over their normal business [8]. This situation contributed towards the disruption of brand identity primarily if the oil and gas corporations aim to position their brand identity on sustainability. Furthermore, it is argued that a corporation's brand identity is greatly affected by consumer perception, such as consumers' perceptions of sustainability [9].

Brand positioning is an essential element in corporate branding [10]. High-value branding indicates market and consumers' trust in them and upholds their reputation with the non-market stakeholders such as regulators and societies [10]. It allows the corporation to communicate and embed its aspiration and vision in the stakeholder's minds and hearts. Hence, various studies have been conducted to understand how the corporation should position its brand. In terms of sustainability, brand positioning relates to how a corporation integrates sustainability into corporate practices, communicating practices to the customer and incorporating them into the brand image [11,12]. All these elements, including brand identity, shall be accrued into brand equity. Brand equity enables the corporation to measure the strength of its brand within the market.

Several studies have been conducted in the oil and gas industry focusing on corporations' brand equity. For instance, Ceciliano and colleagues looked into the impact of CSR programmes on corporations' brand equity amongst oil and gas companies in Brazil [13]. Similarly, Zaharil and colleagues looked at corporate brand equity in Malaysia [14]. Although multiple studies have addressed the issues of brand equity in the oil and gas industry, research that connects brand equity with sustainable initiatives and CSR still needs to be completed. Therefore, it is crucial to study the effect of the sustainable initiative by the oil and gas industry, which is primarily embedded in CSR, on the industry's brand equity. Furthermore, by focusing on this perspective, this study also observed whether allegations such as astroturfing and greenwashing through CSR impact the corporation's brand equity. Thus, questions such as what factors influence sustainable brand equity and whether there are significant differences among different nations should be answered.

Hence, this study aimed to answer the given questions. To do that, two main objectives were developed. First, the study identified factors affecting brand equity in sustainable development. Second, the study compared these factors' relationship between two different corporations operating in two other countries. The aim of the study was to close the current gap in understanding the linkage between brand positioning and sustainable development in the oil and gas industry. Moreover, findings from this industry can become a reference point for other sectors on how to develop sustainable brand equity.

Therefore, adapting Aaker's brand equity model aligns with this study's objective [15]. The main aim of this study was to investigate how sustainable brand positioning is demonstrated in a high carbon footprint and high-risk sector [16,17]. To achieve that, there were

two sub-objectives. First, to describe and compare the current sustainable brand positioning through CSR activities in the oil and gas industry between Malaysia and Indonesia. The second sub-objective was to investigate whether there is any difference between Malaysia and Indonesia in terms of factors affecting brand equity in the oil and gas industry in the two countries. The study aimed to provide insights into the nation's sentiments within the two countries as the stakeholders, and offer some insights into future ventures specifically related to sustainability.

Following the introduction section, the article will present the background of the study. Then, it will continue with a literature review, complete with hypotheses development. The Section 4 will discuss the methodology used in this study, followed by the result presentation in the next section. The Section 7 will discuss the outcome of this study.

2. Background of Study

Malaysia is Southeast Asia's second-largest oil and natural gas producer after Indonesia and the fifth-largest exporter of liquefied natural gas (LNG) globally, as of 2019 [18]. The oil and gas industry is an important sector of Malaysia's economy, contributing 20% to the annual GDP [19]. Whilst Indonesia is one of the top 20 largest oil producers in the world, accounting for approximately 1.2% of world oil production, ranked fourth among LNG exporters in the world, and was the world's fifth-largest natural gas producer, where the oil and gas industry comprises about 3.4% of Indonesia's GDP, as of 2016 [20]. Despite the extensive proven oil and gas reserves in both countries, achieving exact sustainability remains challenging among key players and stakeholders in the oil and gas industry.

Both Indonesia and Malaysia have a state-owned petroleum corporation. The Indonesian national oil company is known as Perusahaan Pertambangan Minyak dan Gas Bumi Negara (PERTAMINA), while the Malaysian national oil company is known as Petrolim Nasional Berhad (PETRONAS). Each company is listed in the Fortune 500 list [21]. The involvement of both corporations in sustainability development includes multiple areas such as greenhouse gas (GHG) reduction pledges, community empowerment, and CSR based on Sustainable Development Goals (SDG) [22,23]. The selection of these two countries and corporations is crucial as both are national oil companies, and their brand identity amongst the people is vital as it also relates to the state image and capability of running their respective oil companies. Furthermore, studies that compare both corporations from the perspective of sustainable branding are still limited. This study aimed to shed some light on understanding how sustainable branding works from the perspective of the oil and gas industry.

3. Literature Review

3.1. Image Perception and Sustainable Branding of Oil and Gas Corporation

Oil and gas trading is stigmatised for its lack of sustainability and this may tarnish petroleum companies' reputation. The perception of brand image and corporate reputation organisation has been empirically studied by various studies in the literature [24–27]. Corporate reputation is one of the highest risks faced by oil and gas companies, as it can lead to a company's success or reputation damage. Reputation incorporates elements of trust, credibility, responsibility, and accountability and can affect the willingness of communities to forgive corporate misdemeanours. The environmentalist's role was to positively impact the company's reputation governance by influencing stakeholders' perceptions but not their behaviour. One case study involved BP as one of the oil and gas companies that was subject to controversy for human rights abuses, where the company was overwhelmed with critics for causing environmental damage due to their activities [24]. However, some respected oil and gas companies such as Shell have become rather bureaucratic and institutionalised during their years of operation by taking a very strict step on corporate reputation management by having a significant restructuring and adopting a systematic approach to meet society's changing expectations [28,29].

Varied stakeholder groups may have numerous perspectives on company reputations since reputation has different dimensions and is problem specific [25,30]. For example, a positive corporate image to stakeholders, such as suppliers and clients, may influence loyalty and business. Investors benefited from higher and more stable shareholder values, while a strong brand reputation among government officials may affect operating licences and regulations. Corporate reputation is greatly influenced by corporate branding, where a good corporate brand and reputation management delivers implications for financial and business opportunities [31,32]. Stakeholder perceptions of organisations seeking to improve their reputation are influenced by how performance data are presented [33]. Other than that, corporate image advertising is also a great effort in managing corporate reputation implemented by four major oil and gas companies: ExxonMobil, Royal Dutch Shell, Chevron, and British Petroleum (BP). An advertisement that shows a positive image may influence the public's perception of oil and gas activities, especially regarding the environmental effects such as climate change.

Sustainability perception was established in response to stakeholder demands. The report is a critical mechanism to fetch stakeholders in sustainability revelation [34]. Several research series were conducted to assess the sustainability reporting practices of oil and gas companies in terms of the management of their supply chain, and the relationship between the external factors that influence the adoption of sustainable supply chain management (SSCM) practises [16,35,36]. External forces were shown to affect the SSCM strategies [37]. The framework of SSCM practises was then effectively implemented to design sustainable supply chain strategies and to achieve its sustainability goals [36]. Global Reporting Initiative (GRI) indicators are used as a proxy to classify a company's approach and frame the comparability problem among companies toward its sustainability factors [38,39]. It was also argued that it is essential for the oil and gas companies to maintain a close relationship with the stakeholders for the economic, natural environment, and social resources and thus engage stakeholders and explain the sustainability reporting [34]. A study by Fragouli and Ekruka recommended that adopting corporate social responsibility (CSR) may improve the risk management approach for a solid corporate reputation among stakeholders. Still, it is insufficient unless the proper culture is developed via the execution of effective risk management policies [26].

3.2. Perception of the CSR Programs by the Oil & Gas Corporation

Recently, CSR has risen to prominence as a global movement with both practical and theoretical ramifications. CSR programs are essential in contributing to corporate reputations and purposely building a solid corporate brand, especially for the oil and gas industry. A specific CSR activity based on environmental awareness can significantly impact corporate branding [40]. Stakeholder involvement is positively related to CSR reputation. It may be regarded as a critical internal factor that can help create a company's culture and is more likely to convey CSR matters [41]. Frynas has raised the income transparency, a foremost governance concern for global oil and gas corporations [42]. The study asserted that resolving the governance issue is crucial to addressing the impact of corporate activities where the present CSR and policy initiatives are woefully inadequate and may lead to governance failures.

The oil and gas industry will benefit from CSR matters such as operational safety, economic effect, environmental responsibility, charity, and sustainability programmes that promote oil and gas businesses' efforts to safeguard the environment [32,43,44]. While social activities such as employee well-being and community development are important value drivers, environmental and economic sustainability have minimal influence on the market value of O&G corporations [45].

Several studies argue about the influence of organisations' disclosure towards a better CSR reputation and found that CSR fields and sustainability reporting help improve the CSR reputation of an oil and gas company [46]. Ekhatior appraises the CSR practice of the oil and gas industry in Nigeria by Chinese oil firms, and one of the findings is the impact

on the Nigerian economy [47]. Additionally, the lack of apparent networking with local communities in CSR activities appears to be a fundamental flaw in CSR programmes. Musa and colleagues extend the literature not only to oil and gas firms' activities inclusive of CSR programs, but also focusing on the significant number of businesses raised due to CSR by the oil industry, which influences communities' economies [48]. It is proven that the CSR programmes initiated by an oil and gas corporation could contribute to either strong or weak brand equity. Having substantial brand equity could benefit corporations.

3.3. Brand Equity

Scholars and practitioners have determined that brand equity is essential for businesses [49–52]. Brand equity will increase the positive perception towards the corporation and subsequently increase consumer support. Good brand equity in the oil and gas industry can translate towards a more competitive advantage as corporations will get more help from the consumer and the market. Thus, businesses must adopt tactics that foster brand equity to maximise the chance of such positive contributions and effectively manage brands [9].

Sustainability 2023, 15, x FOR PEER REVIEW previous study has indicated that multiple factors contributed to brand equity. One of the avenues is through marketing mix elements [53]. Marketing mix enhances consumer brand awareness of a particular product. Furthermore, marketing mix is also associated with developing brand association, where when consumers frequently use a product, they tend to associate themselves with the product brand [54]. Similarly, constant development of new products also help to develop loyalty towards the products' brand. It is argued that an amalgamation of tangible and intangible aspects within products

H1. The brand equity of sustainable products is positively affected by the perceived quality, brand loyalty, sustainable brand awareness, sustainable brand association, and perceived quality of sustainable initial brand association, and brand loyalty between Indonesia and Malaysia;

Aaker has considered brand equity a multidimensional concept, comprising brand awareness, perceived quality, brand association, and brand loyalty [55].

H2. Sustainable brand awareness affects sustainable brand equity of oil and gas corporations in Indonesia and Malaysia.

H3. Perceived quality of sustainable products affects sustainable brand equity of oil and gas corporations in Indonesia and Malaysia.

H4. Brand association affects sustainable brand equity of oil and gas corporations in Indonesia and Malaysia.

H5. Brand loyalty of sustainable products affects sustainable brand equity of oil and gas corporations in Indonesia and Malaysia.

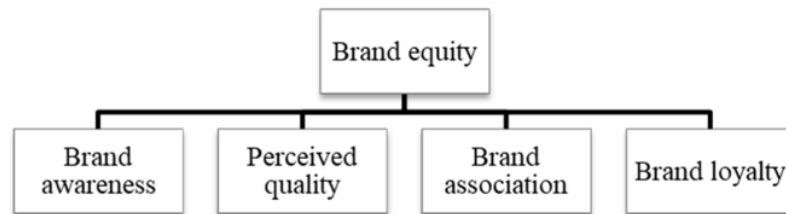


Figure 1. Aaker's Brand Equity Model.

From the perspective of oil and gas sustainability branding, the concept of branding, and brand equity, must be associated with sustainability. According to the previous discussion of literature, corporations embarked on constructing CSR programmes to cater to the needs of the community.

4. Methodology

The study was based on quantitative data approaches where the primary data gathered from the survey to local communities on communication effectiveness, reputation perception, and expectations. The questionnaire was disseminated for quantitative data collection in this study. The target communities in this study included the popula

of selected localities in Indonesia and Malaysia where oil and gas operations are pr

to their sustainability vision. Various literature has also indicated that the CSR programme has an effect on developing the 'good image' of the corporations [58]. However, an understanding of its functional mechanism is still lacking. This study embarks on adopting Aaker's brand equity model to understand how sustainable brand equity functions in the oil and gas industry. At the same time, this study identified the elements associated with brand equity; according to Aaker's model, it will affect the sustainable brand equity itself in both Malaysian and Indonesian oil and gas corporations. To achieve that, this study developed five hypotheses.

H1. There is a significant difference in the community perception of oil and gas corporations' sustainable brand equity, sustainable brand awareness, perceived quality of sustainable initiatives, brand association, and brand loyalty between Indonesia and Malaysia;

H2. Sustainable brand awareness affects sustainable brand equity of oil and gas corporations in Indonesia and Malaysia;

H3. Perceived quality of sustainable initiatives affects sustainable brand equity of oil and gas corporations in Indonesia and Malaysia;

H4. Brand association affects sustainable brand equity of oil and gas corporations in Indonesia and Malaysia;

H5. Brand loyalty of sustainable initiatives affects sustainable brand equity of oil and gas corporations in Indonesia and Malaysia.

4. Methodology

The study was based on quantitative data approaches where the primary data were gathered from the survey to local communities on communication effectiveness, reputation perception, and expectations. The questionnaire was disseminated for quantitative data collection in this study. The target communities in this study included the population of selected localities in Indonesia and Malaysia where oil and gas operations are prominent, e.g., Kerteh in Malaysia and Kelurahan Parigi Baru, Tangerang in Indonesia. Enumerators were appointed to assist the respondents. However, the respondents still answered the questionnaire by themselves. The primary data were gathered for sustainable brand positioning analyses. The pilot and actual study were conducted in 2021. The following section discusses the items used as the instrument for this study.

4.1. Measurement

The questionnaire used in this study was adapted from Aaker's model. There were four constructs in the survey instrument. The instrument was divided into two major sections. The first section was for demographic information. The second section measured respondents' responses to the constructs used in this study. Items used in this study were adopted by Aaker and Jones [15,59]. It was translated into both Bahasa Melayu and Bahasa Indonesia. The items were later back-translated into English. Face validity involving two experts in the field was conducted to ensure the items used were able to measure what it was intended to measure. The final list of items can be found in the descriptive analysis section.

4.2. Sampling

Purposive sampling was used for this study. A total of 448 respondents were involved in this study; 216 respondents from Malaysia and 232 respondents from Indonesia. The study targeted the local communities in the east coast area in Malaysia and Kelurahan Parigi Baru in Indonesia. Most of the Malaysian respondents are from Terengganu (92.7%), the area where oil and gas industry operations are prominent, and 100% of Indonesian respondents are from Kelurahan Parigi Baru, Tangerang.

4.3. Pilot Study

Before full-scale data collection, a pilot study in which 39 respondents participated was conducted to test the instrument's reliability and validity of the questionnaire used. The Cronbach's alpha and composite reliability scores were used to identify the internal consistency among the items used. All the constructs showed a very high Cronbach's alpha score of more than 0.7, indicating that the instrument used was reliable and internally consistent. Thus, the instrument was implemented in this full-scale study. Table 1 shows the Cronbach Alpha score for each construct.

Table 1. Cronbach Alpha score for each construct.

No	Constructs	No. of Item	Cronbach Alpha
1.	Sustainable Brand Awareness	5	0.770
2.	Perceived Quality of Sustainable Initiatives	6	0.885
3.	Brand Association	6	0.858
4.	Brand Loyalty of Sustainable Initiatives	5	0.901
5.	Sustainable Brand Equity	5	0.849

4.4. Data Analysis

The collected responses from the respondents were first screened for missing data. The data were then analysed for demographic and descriptive findings using descriptive statistics. The data were analysed for comparative analysis using an independent sample t-test. To test whether the path coefficient of one group is significantly more significant than another, a Partial Least Square—Multi-Group Analysis (PLS-MGA) was conducted [60].

5. Findings

5.1. Demographics

The demographical analysis shows that most of the respondents are from Terengganu, where the O&G industry is saturated. Of these, 60.2% were male respondents. Leading in terms of age were respondents between 20 and 30 years old. Meanwhile, 73% of the respondents were married. Based on educational level, the majority had a certificate, followed by secondary school and a bachelor's degree. The monthly income obtained by most was between RM 2001 and RM 3000. Of the respondents, 68.3% to 71.7% had participated at least once or twice. Most of the CSR programs experienced by the respondents were community services. Others had attended educational programs. Most of the participating respondents think that the benefits gained from the CSR programs help those in need and concerns of the corporate for the well-being of the community. This highlights that corporate needs to be more attentive to getting to know the condition of the community. Details on the demographic study are shown in Table 2.

5.2. Descriptive Analysis

Sustainable brands represented by the oil and gas industry in both countries were viewed positively by the people. Most agreed that they know the oil and gas industry's sustainable initiatives. Their brand can be identified easily compared to other brands. On the perception of the quality of sustainable initiatives present by the oil and gas industry, people believe the oil and gas industry is very reliable in delivering its roles and functions. Moreover, they trusted the quality of services, sustainable initiatives, and programs conducted by the oil and gas industry. People's perception of the brand association was that they believed the oil and gas industry in the country was contributing to society.

The second most agreed on was the logo and their respect towards the people trained by the oil and gas industry. As for the loyalty people have towards the brand of the oil and gas industry, the majority agreed that they grew fond of the brand. Furthermore, they would love to recommend the brand to help it be more widely known. The overall sustainable brand equity of the oil and gas industry in both countries has a significant

impact on the people as they would still choose the oil and gas industry in this country to compare to the others, and most agreed that the oil and gas industry gives significant benefits to the communities. Table 3 shows the Descriptive analysis of the study.

Table 2. Respondents' profiles and demographics.

Respondents Profile	Indonesia Percentage (%)	Malaysia Percentage (%)
Gender		
Male	48.3	60.2
Female	51.7	39.8
Age		
20–30	9.2	28.5
31–40	7.7	22.8
41–50	67.4	20.3
51–60	13.8	17.1
Above 60 years old	1.8	9.8
Below 20 years old	-	1.6
Status		
Single	22.5	21
Married	72.3	73
Divorced	1.8	3
Widow	3.4	3
Educational level		
Certificate	8.0	25.2
Secondary School	-	22.8
Bachelor 's degree	-	22
Drop in the middle of the school	27.4	13.8
Master 's degree and above	6.8	8.1
Diploma	57.4	3.3
Middle school (13–15 years old)	-	3.3
Primary/Elementary school	-	0.8
No formal education	-	0.8
Monthly Income (RM)		
<RM 500/<IDR 1 M	16.0	12.2
RM 500–1000/IDR 1–3 M	25.5	4.1
RM 1001–2000/IDR 3–6 M	50.2	11.4
RM 2001–3000/IDR 6–10 M	7.1	33.3
RM 3001–4000/IDR 10–15 M	1.2	7.3
RM 4001–5000/IDR 15–20 M	-	6.5
>RM 5000/>IDR 20 M	-	25.2
CSR Program Involvement		
Once	71.7	68.3
2–3 times	18.3	14.6
4–6 times	7.4	6.5
7–10 times	2.6	2.4
More than 10 times	-	8.1

Table 3. Descriptive analysis for Malaysia and Indonesia.

Dimensions	Items	Malaysia		Indonesia	
		Mean	SD	Mean	SD
Sustainable Brand Awareness (BA)	I am familiar with oil and gas industry sustainable initiatives in my country	4.42	0.614	3.11	0.948
	The roles and functions of the oil and gas industry in sustainable initiatives come to my mind quickly	4.09	0.768	3.11	1.046
	I can recognise the sustainable initiatives of the oil and gas industry in my country quickly when compared with the other industry initiatives	4.38	0.647	3.09	1.051
	The oil and gas industry in my country comes up first in my mind when I think of initiatives for communities	4.20	0.789	3.07	0.980
	The oil and gas industry in my country is the only brand that comes to my mind when I talk about sustainable initiatives	4.26	0.756	3.06	1.126
Perceived Quality on Sustainable Initiatives (PQ)	I trust the quality of services, initiatives and programs conducted by the oil and gas industry in my country	4.36	0.629	3.06	1.033
	Sustainable initiatives from the oil and gas industry in my country would be of excellent quality	4.33	0.610	3.13	1.015
	Sustainable initiatives from the oil and gas industry in my country offer excellent features and functions	4.28	0.644	3.07	1.034
	I can expect a superior performance of sustainable initiatives from the oil and gas industry in my country	4.37	0.592	3.10	1.006
	The oil and gas industry in my country is very reliable in delivering its roles and functions in sustainable initiatives	4.40	0.637	3.11	1.057
Brand Association (BAsc)	The oil and gas industry in my country's sustainable initiatives is better as compared to other industry initiatives	4.34	0.651	3.11	1.032
	The oil and gas industry in my country has a unique brand image, compared to competing brands and companies	4.32	0.605	3.08	1.041
	I respect and admire people who have been trained by the oil and gas industry in my country	4.35	0.653	3.04	0.969
	I like the logo of the oil and gas industry in my country	4.45	0.603	3.11	1.006
	The oil and gas industry in my country is well regarded by my friends	4.33	0.649	3.10	1.048
Brand Loyalty on Sustainable Initiatives (BL)	I am proud to have participated in sustainable initiatives/programs by the oil and gas industry in my country	4.23	0.722	3.05	1.025
	I believe the oil and gas industry in my country is contributing to the society	4.50	0.564	3.04	0.945
	After knowing the oil and gas industry in my country, I grow fond of it	4.41	0.626	3.08	0.969
	I consider myself to be loyal to the oil and gas industry in my country	4.26	0.612	3.110	0.993
	When participating in sustainability-related initiatives in the communities, the oil and gas industry in my country would be my first choice	4.24	0.714	3.07	1.034
	I will keep on engaging and participating in the oil and gas industry in my country sustainable initiatives as long as I am satisfied	4.27	0.690	3.06	1.000
	I would love to recommend the oil and gas industry sustainable initiatives in my country to my friends	4.37	0.590	3.10	1.029

Table 3. Cont.

Dimensions	Items	Malaysia		Indonesia	
		Mean	SD	Mean	SD
Sustainable Brand Equity (BE)	The oil and gas industry in my country has implemented its role and functions well to support the sustainable development agenda in the communities	4.33	0.647	3.10	0.985
	Even if another corporation/brand has the same sustainability programme as the oil and gas industry in my country, I would prefer the oil and gas industry in my country	4.33	0.634	3.09	1.027
	If another brand is not different from the oil and gas industry in my country in any way related to the sustainability programme, it seems smarter to still choose the oil and gas industry in my country	4.43	0.641	3.07	0.920
	The sustainability programme by the oil and gas industry in my country is more than just a programme for me	4.29	0.674	3.08	0.884
	Communities significantly benefit from the oil and gas industry sustainability programme in my country	4.35	0.677	3.030	0.947

5.3. Comparative Analysis

A comparative analysis was conducted to describe further the current situation of sustainable brand positioning in the oil and gas industry between Malaysia and Indonesia. The research will also answer the study's first hypothesis. Using independent samples t-test, the total mean score of all constructs was analysed. Based on the analysis, there is a significantly different in terms of total mean score between Malaysia and Indonesia in sustainable brand awareness, Malaysia (M = 4.272, SD = 0.519), Indonesia (M = 3.082, SD = 0.912), $t(379) = 17.26$, $p < 0.001$; perceived quality on sustainable initiatives, Malaysia (M = 4.347, SD = 0.500), Indonesia (M = 3.090, SD = 0.912), $t(389) = 18.53$, $p < 0.001$; brand association, Malaysia (M = 4.362, SD = 0.485), Indonesia (M = 3.064, SD = 0.890), $t(391) = 19.66$, $p < 0.001$; brand loyalty on sustainable initiatives, Malaysia (M = 4.309, SD = 0.549), Indonesia (M = 3.078, SD = 0.887), $t(353) = 17.62$, $p < 0.001$; sustainable brand equity, Malaysia (M = 4.345, SD = 0.517), Indonesia (M = 3.068, SD = 0.835), $t(353) = 19.41$, $p < 0.001$. Thus, the first hypothesis of this study is accepted. Details of the analysis are shown in Table 4 and Figure 2.

5.4. Partial Least Square-Multi Group Analysis

5.4.1. Assessment of Measurement Model

In the first stage of analysis, the acceptability of the measurement models must be confirmed. The assessment of a measurement model entails evaluating the validity and reliability of its latent variables (LVs). The validity, in turn, comprises two types—convergent and discriminant. Evaluating the reliability and validity of the model involves assessing the relationships between the LVs and their associated items using the composite reliability (CR) and average variance extracted (AVE). The measurement models used in this study included five constructs: (i) sustainable brand awareness, (ii) perceived quality of sustainable initiatives, (iii) brand association, (iv) brand loyalty of sustainable initiatives, and (v) sustainable brand equity. In assessing model reliability, the loading of each indicator on its associated LV must be calculated and compared with a threshold. A measurement model is considered 'valid' if the AVE is greater than 0.5, and 'reliable' if the CR is greater than 0.70 [61]. Table 5 indicates that the CR value was greater than 0.70 and AVE was greater than 0.50 for the two sample groups. Therefore, the measurement used was valid and reliable for both groups.

9 **Table 4.** Independent t-test analysis.

	Levene's Test for Equality of Variances		t-Test for Equality of Means							
	F	Sig.	t	df	Sig. (2-Tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
								Lower	Upper	
Sustainable Brand Awareness	Equal variances assumed	33.38	0.000	13.65	445	0.000	1.190	0.087	1.018	1.361
	Equal variances not assumed			17.26	379.248	0.000	1.190	0.069	1.054	1.325
Perceived Quality of Sustainable Initiatives	Equal variances assumed	42.48	0.000	14.48	445	0.000	1.257	0.087	1.086	1.427
	Equal variances not assumed			18.53	389.652	0.000	1.257	0.068	1.124	1.390
Brand Association	Equal variances assumed	39.47	0.000	15.33	445	0.000	1.298	0.085	1.132	1.464
	Equal variances not assumed			19.66	391.545	0.000	1.298	0.066	1.168	1.428
Brand Loyalty of Sustainable Initiatives	Equal variances assumed	27.62	0.000	14.37	445	0.000	1.231	0.086	1.062	1.399
	Equal variances not assumed			17.62	352.945	0.000	1.231	0.070	1.093	1.368
Sustainable Brand Equity	Equal variances assumed	25.25	0.000	15.83	445	0.000	1.277	0.081	1.118	1.435
	Equal variances not assumed			19.41	352.955	0.000	1.277	0.066	1.147	1.406

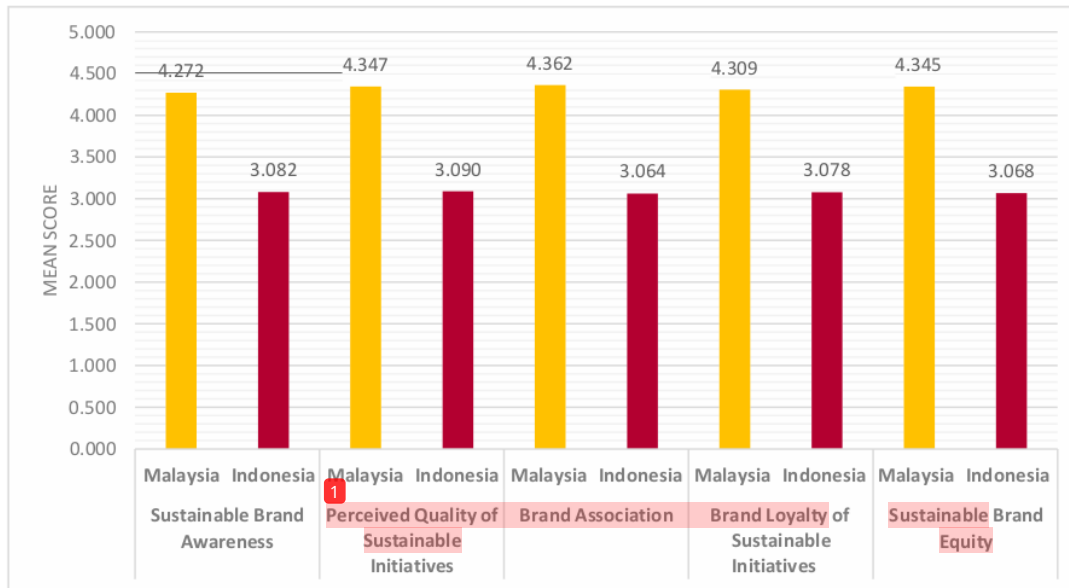


Figure 2. Comparison of total mean score in sustainable brand positioning between Malaysia and Indonesia.

5. Table 5. Convergent Validity and Group Analysis

5.4.1. Assessment of Measurement Model

Construct In the first stage of analysis, the acceptability of the measurement models must be confirmed. The assessment of a measurement model entails evaluating the validity and reliability of its latent variables (LVs). The validity, in turn, comprises two types—conver-

Perceived Quality of Sustainable Initiatives (PQ) and discriminant. Evaluating the reliability and validity of the model involves as-

Brand Association (BA) the relationships between the LVs and their associated items using the composite

Brand Loyalty of Sustainable Initiatives (BL) reliability (CR) and average variance extracted (AVE). The measurement models used in

Sustainable Brand Equity (BE) this study included five constructs: (i) sustainable brand awareness, (ii) perceived quality

of Sustainable Initiatives (PQ), (iii) brand association, (iv) brand loyalty of sustainable initiatives, and (v) sustainable brand equity. In assessing model reliability, the loading of each

Discriminant validity is the extent to which each LV is distinct from other constructs in the model [61]. To establish discriminant validity, the heterotrait–monotrait (HTMT) ratio

is greater than 0.70 [61]. Table 5 indicates that the CR value was greater than 0.70 and AVE was greater than 0.50 for the two sample groups. Therefore, the measurement used was

valid and reliable for both groups. This study utilised the more flexible HTMT ratio of 0.90 to assess discriminant

validity. Table 6 presents the HTMT ratios of the discriminant validity assessment of the measurement model.

Table 5. Convergent validity and reliability.

Construct	Malaysia		Indonesia	
	CR	AVE	CR	AVE
Sustainable Brand Awareness (BA)	0.895	0.588	0.957	0.789
Perceived Quality of Sustainable Initiatives (PQ)	0.845	0.523	0.948	0.784
Brand Association (BAsc)	0.892	0.624	0.946	0.777
Brand Loyalty of Sustainable Initiatives (BL)	0.927	0.719	0.948	0.786
Sustainable Brand Equity (BE)	0.914	0.640	0.958	0.791

Note: Composite Reliability (CR), Average Variance Extracted (AVE).

Discriminant validity is the extent to which each LV is distinct from other constructs in the model [61]. To establish discriminant validity, the heterotrait–monotrait (HTMT)

Table 6. Discriminant validity based on the heteroit–monotrait (HTMT) criterion.

	Malaysia					Indonesia				
	BA	PQ	BAsc	BL	BE	BA	PQ	BAsc	BL	BE
BA										
PQ	0.256					0.211				
BAsc	0.768	0.414				0.852	0.241			
BL	0.526	0.221	0.573			0.559	0.209	0.683		
BE	0.635	0.334	0.618	0.882		0.702	0.382	0.725	0.771	

Note: BA (Sustainable Brand Awareness), PQ (Perceived Quality of Sustainable Initiatives), BAsc (Brand Association), BL (Brand Loyalty of Sustainable Initiatives), BE (Sustainable Brand Equity).

5.4.2. Measurement Invariance of Composite Models

Before PLS-MGA analysis, an invariance test was conducted to examine the level of similar understanding of the measurement across groups [63]. The permutation test showed that none of the original correlations was significantly different from any other. All the values fall between the upper and lower bounds of 95% confidence interval, as illustrated in Table 7 below. Thus, partial invariance was established for the current research model. Finally, most mean and variance values did not fall between the upper and lower bounds of a 95% confidence interval. Therefore, only partial measurement invariance was established for the present study model. The existence of partial invariance allows for the multi-group analysis to be conducted.

Table 7. Measurement invariance assessment using measurement invariance of composite models.

	c Value	CI 95%	Partial nvariance	Mean Differences	LL	UL	Variance Differences	LL	UL	Full Invariance
BA	0.997	[0.631; 1.000]	Yes	−0.382	−0.231	0.245	0.425	−0.392	0.314	No
PQ	0.982	[0.775; 1.000]	Yes	−0.226	−0.251	0.249	0.301	−0.415	0.438	Yes
BAsc	0.959	[0.836; 1.000]	Yes	0.532	−0.213	0.243	0.410	−0.418	0.302	No
BL	0.996	[0.968; 1.000]	Yes	−0.301	−0.224	0.225	0.474	−0.406	0.313	No
BE	0.972	[0.779; 1.000]	Yes	−0.206	−0.265	0.272	−0.107	−0.551	0.325	Yes

Notes: BA (Sustainable Brand Awareness), PQ (Perceived Quality of Sustainable Initiatives), BAsc (Brand Association), BL (Brand Loyalty of Sustainable Initiatives), BE (Sustainable Brand Equity), CI (Confidence Interval), c value (correlation value), LL (Lower Limit), UL (Upper Limit).

5.4.3. Assessment of Structural Model

In the final analysis stage, the structural models for both groups of states were assessed. Hypotheses were tested by running bootstrapping with a 5000 resample [64]. The R^2 value of the endogenous constructs was calculated as indicative of the explanatory power of the model [61]. The R^2 values for the ‘Malaysia’ and ‘Indonesia’ groups were 0.689 and 0.637, respectively. These results showed that the predictive ability of the endogenous variable of brand equity was substantial for both Malaysia and Indonesia.

To measure the significant impact of each construct on brand equity, a bootstrapping analysis was conducted. Five thousand sub-samples were generated based on the data. Table 8 shows that both brand loyalty of sustainable initiatives and brand association are significant predictors of sustainable brand equity in both Malaysia and Indonesia. To measure whether the path coefficient is significantly larger in one group over another, partial least square–multi-group analysis (PLS-MGA) was conducted [65]. Based on the findings shown in Table 9, there is no group (i.e., Indonesia and Malaysia) that is significantly larger than another in the path coefficient score. Findings from the analysis indicated that the fourth and fifth hypotheses of this study are accepted.

Table 8. Path coefficient for Malaysia and Indonesia.

	Path Coefficient		T and p-Value	
	Indonesia	Malaysia	Indonesia	Malaysia
BA → BE	0.016	−0.019	(t = 0.280, p = 0.780)	(t = 0.221, p = 0.825)
PQ → BE	0.000	0.141	(t = 0.004, p = 0.997)	(t = 1.315, p = 0.189)
BAsc → BE**	0.432	0.351	(t = 7.082, p < 0.001)	(t = 3.011, p = 0.003)
BL → BE**	0.536	0.437	(t = 7.002, p < 0.001)	(t = 4.168, p < 0.001)

Note: ** indicate a significant impact where p-value is <0.05; BA (Sustainable Brand Awareness), PQ (Perceived Quality of Sustainable Initiatives), BAsc (Brand Association), BL (Brand Loyalty of Sustainable Initiatives), BE (Sustainable Brand Equity).

Table 9. PLS-MGA analysis for Malaysia and Indonesia.

	BC Confidence Interval 95%		Path Coefficient Differences	p-Value
	Indonesia	Malaysia		
BA → BE	[−0.106, 0.125]	[−0.186, 0.130]	0.081	0.539
PQ → BE	[−0.145, 0.153]	[−0.044, 0.384]	0.035	0.733
BAsc → BE	[0.295, 0.544]	[0.107, 0.551]	0.099	0.444
BL → BE	[0.394, 0.687]	[0.228, 0.617]	−0.141	0.288

Note: BC (Bias-Corrected), BA (Sustainable Brand Awareness), PQ (Perceived Quality of Sustainable Initiatives), BAsc (Brand Association), BL (Brand Loyalty of Sustainable Initiatives), BE (Sustainable Brand Equity).

In conclusion, the analysis conducted by this study indicates that the first, fourth and fifth hypotheses proposed are accepted, while the second and third hypotheses are rejected.

6. Discussion

This study embarked on two objectives. The first objective was to describe and compare the current sustainable brand positioning in the oil and gas industry between Malaysia and Indonesia. This study's findings indicated that the oil and gas industry in Malaysia is perceived to have a better brand identity by the local communities in the perspective of sustainable initiatives. The findings are in parallel with several other studies conducted investigating the oil and gas industry in Malaysia and Indonesia as a subject. For instance, in a study conducted in Sulawesi, Indonesia, Wangke argued that Sulawesi's local community voiced their disgruntlement towards oil and gas activities in that region [66]. Similarly, other studies conducted in the Indonesia region highlighted that CSR policy initiated by the oil and gas industry does not contribute directly to the community's interest [67,68]. Besides that, other issues that have been highlighted are related to the transparency of CSR funds used for community services. It is reported that the lack of clarity in the funds' management could lead to fraud issues in using the funds [67]. This eventually decreases the positive value of CSR by the corporation, hence disrupting the corporation and the industry's branding.

Similarly, Mugety indicated that the community in Banjarmasin, Indonesia has a negative opinion when they describe the oil and gas industry's social responsibility towards the local community's health [69]. However, several other studies reported that the oil and gas industry develops positive effects on the local community through CSR activities. Agustina shows that the CSR activities in conducted Gresik, Indonesia by the oil and gas industry positively affected the local community [70]. Different polarities in the local community's perception demonstrate that brand identity and sustainable initiatives require more oil and gas industry attention. The lack of awareness of CSR objectives might contribute to this situation.

This study's findings on the Malaysian situation echoed other previous studies. Ramli highlighted that the oil and industry powerhouse in Malaysia, PETRONAS, has created an extensive brand commitment campaign to ensure local community awareness of its

presence and functions [71]. The campaign includes communicating their sustainable vision and initiatives to the publics and local communities. Likewise, Hazrati and Hefron, reported that PETRONAS invested RM230 million just for corporate social activities alone [72]. The constant communication by PETRONAS has created a solid sustainable brand identity and equity amongst the local community in Malaysia. Moreover, the oil and gas industry in Malaysia is commonly associated with the company as the company is solely responsible for any exploration and upstream oil and gas activity in Malaysia.

The second objective was to investigate whether there is any difference between Malaysia and Indonesia in terms of factors affecting brand equity of the oil and gas industry in the two countries. The findings indicated that there is no difference between Malaysia and Indonesia. Findings from this study indicated that both brand loyalty of sustainable initiatives and brand association are the significant predictors of sustainable brand equity in the context of sustainable CSR activities for both Malaysia and Indonesia. Whilst brand awareness and perceived quality are not significant predictors. The findings are in parallel with a study conducted in the downstream petroleum industry in Ghana [73]. Consumers in Ghana demonstrated that a strong brand loyalty is among crucial factors for strengthening downstream petroleum industry brands.

Similarly, other researchers indicated that CSR activities might enhance stakeholders' associations with the corporation [74]. This relationship indubitably could lead to better brand equity among the stakeholders. In this study case, brand association and loyalty are the essential elements that create a sense of belonging between the local communities and the oil and gas industry. Furthermore, both Malaysia and Indonesia are known to have established state-owned oil and gas corporations. Malaysia, for instance, has PETRONAS; the corporation is currently seated at number 277 in the Fortune 500 [21]. Indonesia's state-owned oil and gas corporation, PERTAMINA, is number 287 [21]. The presence of powerful state-owned corporations in the oil and gas industry demonstrates the possible existence of a sense of belonging amongst its citizens. These later develop into a strong desire for brand association and brand loyalty as significant predictors for brand equity within this industry. This further emphasises how sustainable brand positioning is created through the influence of identity concepts and a sense of belonging.

7. Conclusions

High-risk and high carbon footprint sectors are always a major potential threat to the global sustainability initiative. The oil and gas industry is one of the sectors. Despite being beneficial to global energy demands and development, its existence has also created multiple environmental disasters. Furthermore, in the last few decades, the oil and gas industry has been allegedly associated with local community rights' infringement, including forceful land claims, disrupting the local community's economic activities, and developing threats to their local environment. These have resulted in multiple initiatives, including promoting CSR activities, to enhance their relationships with the local community. Part of this is to ensure sustainable brand positioning amongst them.

This study investigated how sustainable brand positioning is demonstrated in a high-risk sector. By comparing the oil and gas industry situation in Malaysia and Indonesia, this study has shown how brand loyalty to sustainable initiatives and brand associations can predict sustainable brand equity. Arguably, state-owned oil and gas corporations in both countries develop a strong sense of belonging amongst the local community. This study's findings help academics and practitioners understand the mechanism of sustainable brand equity in a high-risk sector, namely Malaysia and Indonesia's oil and gas industries. Secondly, this study indicates the differences in sustainable brand equity between Malaysia and Indonesia. Findings from this study should also benefit policymakers and strategic planners in the oil and gas industry. Corporations should focus on promoting the brand association and brand loyalty when communicating sustainable initiatives to their stakeholders. This includes the emphasising of brand image in sustainable initiatives and

consistent promotion of corporations' sustainable conducts. Failure to address this matter might affect their brand equity amongst the stakeholders.

Despite this, several limitations can be reported from the study. First, the study only focused on adopting Aaker's model in explaining brand positioning. Future research can identify other models to be tested and examined. Second, the study constructed the concept of sustainable brand positioning through oil and gas CSR activities. In doing so, the study engaged only with respondents with experience in CSR activities. However, brand positioning, especially in the oil and gas industry, transcended to the national level involving millions of consumers that might not have any first-hand experience with the oil and gas industry CSR program. Therefore, future studies should explore how sustainable initiatives can be communicated through other platforms, such as advertisements and reports. The impact of this platform on sustainable brand positioning has to be measured.

However, this was different from the aim of this study. Future studies should look directly into the impact of social identity and sense of belonging on sustainable brand equity.

Furthermore, future studies could also compare with other countries or other regions. This could further enhance our understanding of sustainable brand positioning in the oil and gas industry. It is also suggested that future research look into other high-risk sectors and compare them. In the case of the oil and gas industry, it could be considered a national asset, and a comparison in terms of brand positioning with other high-risk sectors that are not national assets would be beneficial. This will further help to explain the concept of a sense of belonging and sustainable brand equity.

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