

# From corporate social responsibility to customer satisfaction: A study of repurchase intention in Malaysian petroleum industry

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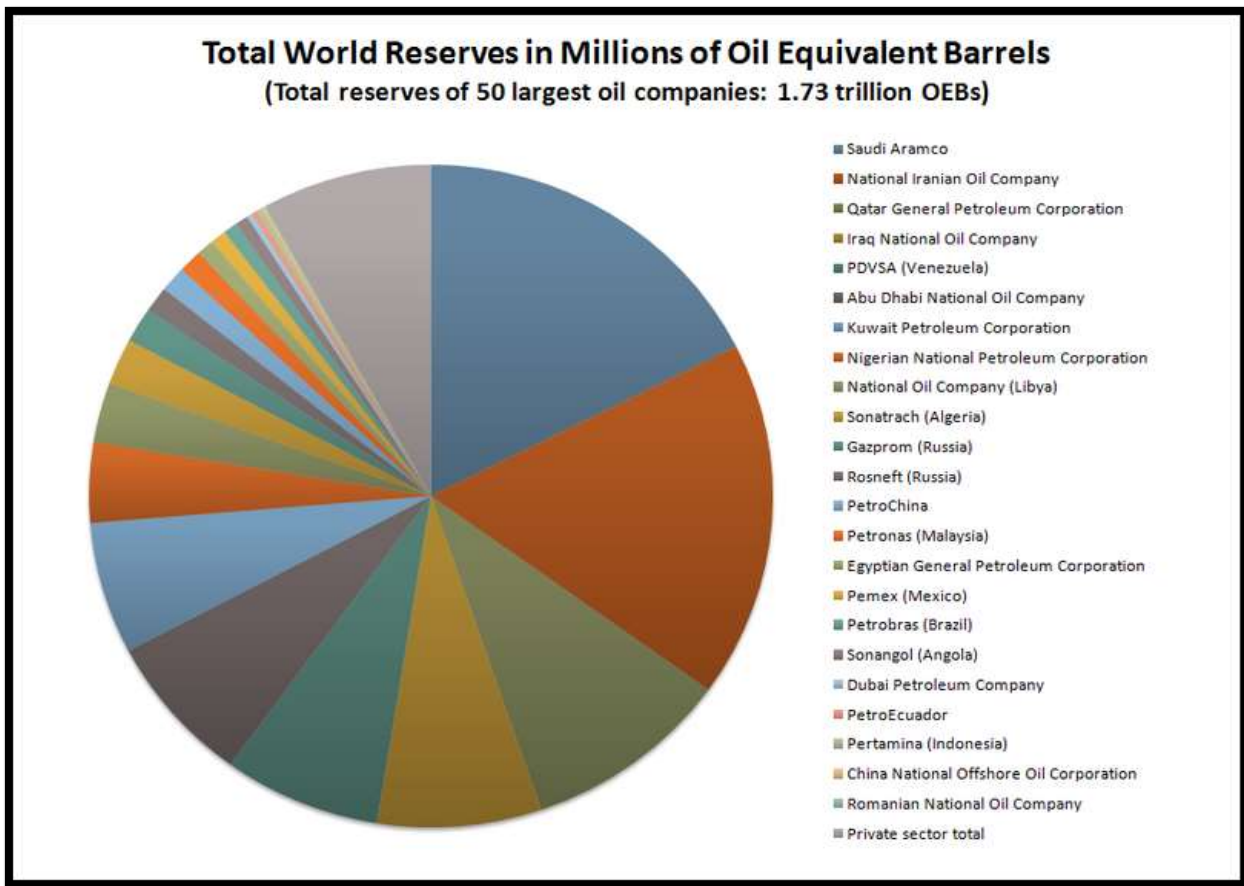
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**Abstract:** Corporate social responsibility (CSR) is an important concept of modern economic theory. In the last few decades, it has become an increasingly popular marketing tool used by companies. Consumers too want to see more CSR activities, especially those focused on environmental protection. The petroleum industry produces both toxic and non-toxic waste at almost all stages of production. While petroleum companies satisfy market demand, they also want to meet consumers' moral and ethical demands. In this light, CSR has become vital for the development of industry. This paper looks at CSR in the petroleum industry, and its effect on customer satisfaction and subsequently toward the customer repurchase intention in Malaysia. The starting point of this paper is the Stakeholder Theory. It then examines CSR endeavors within the oil and gas sector and its link to customer repurchase intentions. It also looks at the established hypotheses between the activities of CSR (Economic Responsibility, Legal Responsibility, Ethical Responsibility, Philanthropic Responsibility), customer satisfaction and repurchase intention. This paper aims to learn about the customer's sense of fulfilment with the CSR activities, and what could be the reaction base on the customer's expectation.

**Keywords:** CSR; customer satisfaction; repurchase intention; petroleum industry

## 1. Introduction

Corporate social responsibility (CSR) is not a new concept but, in the last few decades, it has been gathering attention from both company executives, the public, and scholars (Kim and Park, 2020) because CSR projects investigate causes that promote a better standard of living, such as education, poverty, and environmental protection (Ghanbarpour and Gustafsson, 2022). Indeed, it has become a push factor for many companies and businesses to take seriously the task of implementing their social responsibility (Lee et al., 2020). One industry that has greatly benefited from implementing CSR projects is the petroleum industry (Kim, Yin, 2020). The petroleum industry was chosen because it is a large contributor to the Malaysian GDP (Salam et al., 2022). The industry itself provides Malaysians of all walks of life employment opportunities and economic security (Lee et al., 2022). Further, the oil and gas industry are used by almost all sectors of society (Ahmad et al., 2023). The petroleum industry is truly all-encompassing (Chuah et al., 2022). Yet industry is known for its devastating effects on nature, the environment, and society (Hassan and Soliman, 2021). As shown in **Figure 1**, large oil and gas companies around the world are ramping up their effort and investments in CSR to meet the moral and ethical demands of consumers (Tan et al., 2022). CSR is the salve the industry needs.



**Figure 1.** Oil companies and their location in the world.  
Source: (Oil and Gas, World Oil, Oil Company, 2023).

The last two decades have seen CSR programs aiding the industry tackle its three challenging issues (McWilliams, 2016), especially reducing its carbon footprint (González-Rodríguez et al., 2021). As a result of this, scholars and company executives have taken to studying CSR endeavors, paying special attention to its strategic importance in the company and industry (Ahn et al., 2021). These projects have brought manifold benefits to the environment and society, painting a positive view of the industry (Guo et al., 2022). Besides this, these petroleum companies are also seeing the demands for their offerings growing (Baumeister et al., 2022). This research focuses on the role CSR projects play in customer satisfaction and repurchase intention in the petroleum industry. The investigative scope of this research will look at employees and customers in the oil and gas (petroleum) industry in Kuala Lumpur, Malaysia. This study will develop a theoretical framework founded on papers produced prior to this research and on theoretical concepts in the CSR field. The outcomes will advance the cause of CSR projects in the petroleum industry.

## 2. Literature review

### 2.1. Repurchase intention

A business' target is to deliver the topmost service to their shoppers so as to retain them and to create positive repurchase intentions. Both repurchase intention and customer satisfaction can create a sustainable impression on a company's performance delivering competitive business advantage (Hu et al., 2023), numerous loyal consumers (Bargoni et al., 2023), and growing customer satisfaction. The petroleum industry reported that one of its greatest challenges was maintaining and securing customers' purchase and repurchase intentions. Studies have shown that petroleum companies ought to assist their current clients alternatively than searching for new clients (Jung et al., 2020). A customer's purchase intention is linked to his or her attitude and preference for the brand or product/service (Ahmad et al., 2021). Increasing a customer's repurchase intention depends on that customer's future behavior, which in turn is contingent on a customer's attitudes. Repurchase intention, its hyperlink to customer satisfaction and the quality of provider offered, are considered as vital standards in businesses. When it includes out well, it can assist maximize a company's market share, expand its income and bring down the cost of sourcing and securing clients (Hu et al., 2022). Customers intend to buy from the same supplier or service provider, so long as their recent purchase experience has been satisfactory, as it ensures effective use of time and money (Liu et al., 2022). It implies a long-term commitment between the customer and company to maintain their relationship.

## **2.2. Theory of corporate social responsibility**

In 1953, American economist Howard R. Bowen introduced the theory of corporate social responsibility (CSR). Following the CSR theory, Bowen argues that businesses that observe ethical values and follow guidelines linked to good and safe standards as a strategic plan (Jeannot et al., 2022) in their operations have the opportunity to succeed and even thrive.

Stakeholder theory, developed by R. Edward Freeman, asserts that companies should consider the interests of all parties affected by their actions, not just shareholders (Ghazinoori, 2023). Recent CSR theories refine this view by focusing on interconnected and multi-level influence mechanisms (Debnath, 2024). The key idea is that the actions of a corporation influence a wide range of stakeholders (employees, suppliers, consumers, investors, NGOs) (Fei, 2024), and each of these stakeholders can in turn affect consumer behavior in different ways.

Carroll's Pyramid outlines the four layers of CSR which are economic, legal, ethical, and philanthropic responsibilities (Agbaitoro, 2024). This research finds out that these layers are not static or hierarchically exclusive but are dynamically interwoven in real-world business practices (Leal-Arcas, 2024). Companies often prioritize ethical and philanthropic responsibilities not just as an afterthought but as core elements of their value proposition in the competitive market (David, 2024). This approach challenges the more rigid, tiered structure proposed by Carroll, suggesting a more integrated and fluid model where different CSR aspects can evolve in parallel depending on market demands and corporate strategy.

## **2.3. Hypothesis development**

Businesses play an important role in society. As such, it must build a good reputation for itself with good management and earning skills. The company is socially responsible when it makes good operational and profit-making decisions, and carries out these tasks in a warranted fashion, especially where the priorities of the public is concerned (Latif et al., 2020). Companies should strike a balance between profit making and their role that helps the public and society. This must include growing a business that sustains a positive relationship with the society it operates in.

The obligation to its stakeholders can be broken down to four obligations that follow one after the other, namely Economic Responsibility, Legal Responsibility, Ethical Responsibility and Philanthropic Responsibility. These four components are interdependent (Rayne et al., 2020).

### **2.3.1. Economic Responsibility**

Companies cannot run away from their Economic Responsibility, i.e., to maximize wealth and profit, and to grow the business. Its main role is to produce relevant goods and/or services. Only after fulfilling this, the company could look at its other responsibilities because without it the others become pointless (Yu et al., 2021). If a corporate entity cannot function profitably and uphold sustainability at the same time, it cannot investigate its other obligations. Multinational firms display a keen understanding of their role in society. They contribute to the coffers of the country where they operate, they create jobs opportunities, make sound investments and pay taxes. In 2022, Petronas estimated contribute to the federal government from MYR55 billion to MYR59 billion. The petroleum income tax (Pita) for 2022 is estimated to be between RM14 billion and RM16 billion (FMT Reporters, 2022). Economic Responsibility is an obligation for the company that takes into account all its stakeholders. It aims to assault an equilibrium during commercial, conservation and humanitarian performs (Ahmad et al., 2023). In order to stay on track, Economic Responsibility follows a set standard of ethical and moral regulations. These guidelines will help a company to find solutions that can promote business growth and generate profits while at the same time aiding the community and society (Chuah et al., 2022). Based on the above literature, the following hypothesis is proposed.

H1: Economic Responsibility has a significant effect on customer satisfaction.

### **2.3.2. Legal Responsibility**

Legal Responsibilities apply not only towards individuals but towards businesses as well. As an entity, businesses must be governed by laws and rules. Observing these rules can help businesses strike a balance between making profit, being responsible towards their employees and ethical towards society (Lu et al., 2021). In Malaysia, prior to 1963, businesses were not bound by rules and regulations. They were free to operate, manage and produce as they wished. This saw deplorable conditions among workers at all levels. Where workers and customers were concerned, both were open to exploitation (Zhang et al., 2021). Christian Aid, a UK-based charity fighting global poverty, said social responsibility

projects do not guarantee good business practices. Instead, it wants legally binding obligations for businesses so that local communities do not suffer the bad effects of the business (He et al., 2022). But an analytical piece in February 1, 2010, issue of *Petroleum Economist* does not agree. It says history has revealed that formal regulatory approaches for social and environmental issues have not always worked. This can be seen in developing countries, where many oil firms are located. “If governments did their work properly, there would be little need for CSR”. it stated (Chowdhury et al., 2021). Quite clearly, a company that observes the law is one that is also responsible where society is concerned. Labor law, environmental law and criminal law are among the legal boundaries companies adhere to. In view of the importance of Legal Responsibility, the subsequent hypothesis is proposed.

H2: Legal Responsibility has a significant effect on customer satisfaction.

### **2.3.3. Ethical Responsibility**

Actions and decisions made at a corporate level can have manifold effects on a company’s stakeholders. Considering this, businesses must be ethically responsible by upholding ethical rules, norms and values within the community (Shah and Albaity, 2022). Observing ethics allows a firm to see, understand and act in a compassionate manner. Decisions can be easily made when companies prioritize ethical behavior (Singh and Pathak, 2020). Unlike legal responsibilities, ethical responsibilities are not cast in stone. However, some companies have developed a Code of Conduct which clearly spells out how managers and staff should function in a setting that is ethical. But not all companies have implemented this. In this likelihood, managers become the regulators and apply their own standards of morality on the situation (Hati et al., 2021). It is the force that advances the creation of rules or laws (Luan et al., 2023). Although it comes after economic and legal responsibilities, it contains the very spirit of acceptable business practices. It captures the standards, norms and expectations that reflect the very definition of what customers, executives, shareholders and society see as non-discriminatory and fair. Since ethical issues should be the guiding principle for CSR implementation, the study is proposing the hypothesis which stated.

H3: Ethical Responsibility has a significant effect on customer satisfaction.

### **2.3.4. Philanthropic Responsibility**

The fourth social responsibility of a business can only surface if a company positions itself as an impactful and responsible member of the community. This idea comes with the obligation that the companies are responsible for looking after and contribute towards the well-being of the community (Nadeem and Al-Imamy, 2020). Philanthropy responsibilities are acts given voluntarily for the growth of society. Businesses that partake in philanthropic activities are often seen as good corporate citizens. The humanitarian aspect of this responsibility sees staff will share the burden of the community with programs that lift society’s quality of life (Su et al., 2023). Besides benefits to a community, staff are also motivated, their morale boosted when engaged in these activities (Crosby and Ghanbarpour, 2023). Charity and volunteer work is not always about funds and money aids. It is also about the contribution of time and energy. These efforts such as skills training programs and clearing up beaches bring in lasting changes in society (Hua et al., 2021).

Collectively, people have come to see that generosity and charity can bring a lot of good. These benefits double in this globalized world. Modern technologies are easily accessible, and this has contributed to an ease in social networking in providing philanthropic agenda to most parts of the world. This discussion brings to another proposed hypothesis as follows.

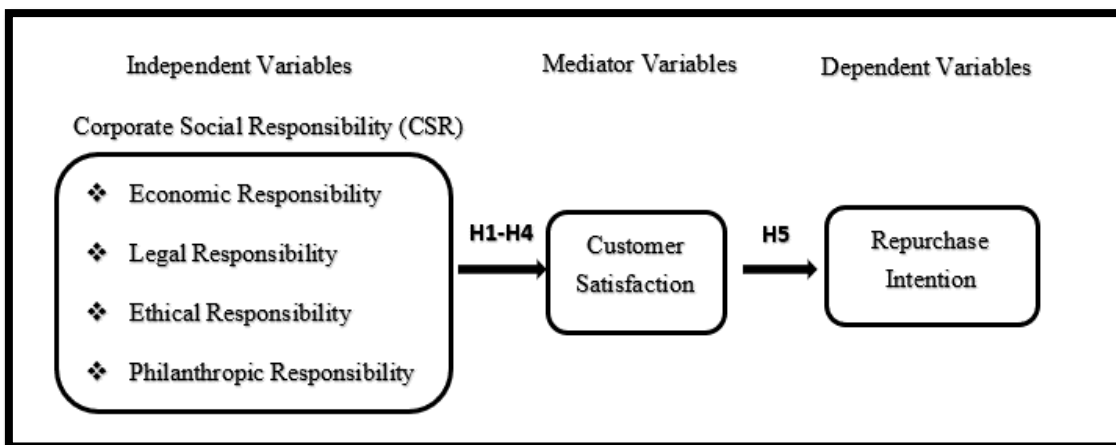
H4: Philanthropic Responsibility has a significant effect on customer satisfaction.

**2.3.5. Customer satisfaction**

Customer satisfaction measures how products or services meet or exceed a customer’s expectation. Customer satisfaction is vital in any business as it gives company executives, especially those in the marketing department, an insight into what consumers expect from the company. They can then use this to fix their errors and improve the business (Valor et al., 2022). In quality management and marketing literature, customer satisfaction is often seen as a part of transaction-specific and multiple transaction-specific satisfaction. In the marketing literature, customer satisfaction has been recognized as an important part of corporate strategy and a key driver of firm long-term profitability and market value (Azad et al., 2022). Customer satisfaction also has a clear relationship with consumer repurchase intentions and loyalty. It can create a point of differentiation for companies. In an environment where companies contend for consumers, customer satisfaction is something that can help the company or brand stand out (Chuah et al., 2020). It has been seen that businesses that prioritize customer satisfaction and make it a key element in their business strategy can survive tough and cut-throat business environments. Hence, to further provide confirmation on the effect of customer satisfaction toward repurchase intention, hypothesis on this effect will be investigated.

H5: Customer satisfaction has a significant effect on repurchase intention.

Based on Carroll’s four-pyramid model (Carroll, 1991), the proposed research framework has been developed. The hypothesized relationships as presented in the previous section are illustrated in **Figure 2**. This proposed framework demonstrates the components of CSR and their association between customer satisfaction and repurchase intentions.



**Figure 2.** The proposed research framework.

### **3. Methodology**

This research adopts the positivist paradigm in the quantitative research method (Shafieizadeh and Tao, 2020). CSR is a multi-dimensional concept that encompasses various dimensions, including environmental responsibility, social responsibility, ethical behavior, and economic contributions (Tang, 2024). To design a questionnaire that effectively measures CSR-related variables, it is essential to ensure a logical connection between the CSR theory and the research variables (Yu, 2024). This research identification of CSR dimensions starts by reviewing CSR theory especially driven from Carroll's Pyramid of CSR (Uduji, 2024). The proposed research framework in **Figure 2** provides a conceptual foundation for understanding CSR's various dimensions. To ensure the accuracy of data analysis, this research collects primary data from a questionnaire survey gathered online and self-administered method of data collection. In this examination, there were 472 usable questionnaires and these respondents who had purchase experiences with petroleum related products. This research analyses customers' responses toward CSR projects organized by companies in the petroleum industry.

For the online survey, this research utilized Google website. This is one of the more effective sites for online data collection. Questionnaire was created using google form, and send google form link to different respondents by social media and via email. Respondents are required to add their email address and answer all the questions before they submit the online form. It ensures that one respondent represents one exclusive email address and can only submit one questionnaire at one time. The replies of each respondent are recorded automatically, and then the data was compiled and analyzed accordingly.

Looking at costs and time limits, a snowball sampling approach to choosing the respondents was used to enhance collection of data (Gracia, 2020). The early stage of this data collection approach, the researcher approached a small group of respondents and explained the purposes of the research. Subsequently, this small group of respondents was given hyperlinks to the online questionnaire allowing them to invite new people to take part in the research. In this way, data collection grew, like a rolling snowball (Cao, 2023). While snowball sampling offers practical advantages in reaching hard-to-access populations and generating rich, contextual data, it is important to acknowledge its potential limitations (Okeke, 2024). By being transparent about these drawbacks, such as sampling bias, ethical concerns, and limitations on generalizability, researchers can better frame the findings and suggest appropriate avenues for future research.

For the self-administered questionnaire, meanwhile, researchers randomly selected a few petrol stations of different brands with a sizeable customer flow, sought assistance in customers who were keen to join in the questionnaire investigation, filled in the form and returned it on the spot (Gracia, 2020).

### **4. Results and discussion**

#### **4.1. Data analysis**

In this study, there were 472 usable data which have been collected. The questionnaire of this research consists of three main parts—Demographic, the effect of CSR (Economic Responsibility, Legal Responsibility, Ethical Responsibility, and Philanthropic Responsibility), customer satisfaction and repurchase intention. A five-point Likert scale from “Strongly disagree” to “Strongly agree” was used to tabulate all answers in the questionnaire. This study used the SPSS Version 27 software for running descriptive analysis (Lin et al., 2020). There are 5 hypotheses (Hypotheses 1 to 5) developed for this research and SmartPLS version 4.2 software was used to examine these hypotheses.

### **Descriptive analysis**

Descriptive data provide numerical and graphic methods to collate a collection of data in a concise and easy-to-understand. It is an important measurement for carrying on statistical data analysis which is used to describe the basic information and profiling about the sampled respondents and how would it better reflect the defined target population. For this analysis, the research has conducted and included the presentation of mean, standard deviation, frequencies and percentages of each of the profiled variables.

From the **Table 1**, it is uncovering that there are 243 male respondents and 229 female respondents. The proportion of male respondents is 51.5%, while the ratio of female respondents is 48.5%. The respondents from 31 to 40 years of age are 145 respondents with the most astounding figure of being 30.7%. Younger generations tend to be more socially conscious and place greater importance towards company’s ethical and environmental practices (Nishi, 2023). These consumers often prioritize sustainability, inclusivity, and environmental justice. CSR initiatives such as reducing carbon footprints, supporting diversity, or advocating for social change are likely to influence their purchasing decisions (Centorrino, 2024). While older generations may still value CSR initiatives, their focus may not be as intense on social or environmental issues. Their priorities often lean toward product quality, cost-effectiveness, and reliability (Rath and Tripathy, 2024). While CSR is important, it might not be the main driver for purchasing decisions. They may expect businesses to be socially responsible but may not be as vocal or demanding about it as younger consumers (Umukoro, 2024). For older consumers, the reputation of a company can play a bigger role in repurchase intentions, and CSR could contribute to that reputation (Gull, 2024). However, the price and functional benefits of a product or service might outweigh CSR concerns in driving loyalty.

There are 182 respondents who are Malay, 137 respondents are Chinese, and 115 respondents are Indians. Likewise, 38 respondents are from other nations. For the instruction foundation, there are 21.8% of the respondents from Diploma, 44.7% of respondents are from bachelor’s degree, 26.9% of them are a Master, 4.0% of respondents have a Ph.D., and 2.5% of respondents are a secondary school confirmation or establishment. There are 51 respondents’ who monthly salary is under RM2000 with a percentage of 10.8%, 134 respondents’ monthly salary of between RM2001 to RM4000 with 39.2% while another 150 respondents with monthly wage of between RM4001 to RM6000 with 31.8%, Low-income consumers may show loyalty to companies that provide affordable, sustainable products or



contribute to causes they care about, but this would depend on the affordability of such products (Esposito, 2023). Companies that offer good value without compromising on CSR might see higher repurchase intentions (Adebanjo, 2024). High-income individuals are more likely to prioritize ethical considerations when making purchasing decisions, as they can afford to choose products based on their CSR commitments (Uduji, 2023). Many affluent consumers are willing to pay a premium for products that align with their values, such as those that support environmental sustainability or social causes (Emeka-Okoli, 2024b). High-income consumers are likely to have a higher repurchase intention if the company’s CSR practices align with their values and lifestyles.

There 109 respondents prefer Petronas, 120 respondents prefer Shell, 111 respondents prefer Petron, and 111 respondents prefer BHPetrol, Likewise, 21 respondents are other Petroleum Companies. The more significant part of respondents is Employees in view of the information. There are 6 groups of Years of Working Experience in the demographic profile. The years between 1 to less than 5, and there are 160 respondents were incorporated into this gathering with a most astounding rate is 33.9%.

**Table 1.** Demographic information.

<b>Criteria</b>	<b>Category</b>	<b>Number</b>	<b>Percentage</b>
Gender	Male	243	51.5%
	Female	229	48.5%
Age Group	18–25	74	15.7%
	26–30	127	26.9%
	<b>31–40</b>	<b>145</b>	<b>30.7%</b>
	41–50	81	17.2%
	Above 50	45	9.5%
	Age Group	<b>Malay</b>	<b>182</b>
Chinese		137	29%
Indians		115	24.4%
Others		38	8.1%
Education Level	Diploma	103	21.8%
	<b>Bachelor</b>	<b>211</b>	<b>44.7%</b>
	Master	127	26.9%
	PhD	19	4%
	Others	12	2.5%
Monthly Income Level	Below RM2000	51	10.8%
	RM2001–RM4000	134	28.4%
	<b>RM4001–RM6000</b>	<b>150</b>	<b>31.8%</b>
	RM6001–RM8000	60	12.7%
	RM8001 or above	77	16.3%
Favorite Petroleum Company	Petronas	109	23.1%
	<b>Shell</b>	<b>120</b>	<b>25.4%</b>
	Petron	111	23.5%

	BHPetrol	111	23.5%
	Others	21	4.4%
Occupation	Government official/Company Managers	45	9.5%
	Technician/Engineer	95	20.1%
	Business/Service	98	20.8%
	<b>Employee</b>	<b>129</b>	<b>27.3%</b>
	Student	77	16.3%
	Others	28	5.9%
Years of Working Experience	Less than 1 year	42	8.9%
	<b>1 to less than 5 years</b>	<b>160</b>	<b>33.9%</b>
	6 to less than 10 years	139	29.4%
	11 to less than 15 years	66	14%
	16 to less than 20 years	29	6.1%
	More than 20 years	36	7.6%

Based on the mean and standard deviation analysis in the **Table 2**, the standard deviation of the Economic Responsibility, Legal Responsibility, Ethical Responsibility, and Philanthropic Responsibility are maintained between 0.45 to 0.57, which means the smaller the dispersion degree, the lower the volatility of data. It is worth to note that, recorded mean values stood at between 4.4465 and 3.9465 for repurchase intention and customer satisfaction respectively. This indicated that respondents agreed with all the statements measuring those intended research variables.

**Table 2.** Descriptive analysis.

	Mean	Std. Deviation
Economic Responsibility	4.2624	<b>0.48929</b>
Legal Responsibility	4.1716	<b>0.46203</b>
Ethical Responsibility	3.785	<b>0.55011</b>
Philanthropic Responsibility	4.0448	<b>0.51966</b>
Customer Satisfaction	3.9465	<b>0.59248</b>
Repurchase Intention	4.4465	<b>0.60796</b>
Valid N (listwise)		

## 4.2. Structural equation model

The research model was tested using a partial least square (PLS) structural equation modelling tool. It assesses the psychometric properties of the measurement model and estimates the parameters of the structural model. This tool enables simultaneous analysis of up to 200 indicator variables, allowing the examination of extensive interactions among moderator and latent predictor variable indicators. It assesses the psychometric properties of the measurement model and estimates the parameters of the structural model.

Traditionally, “Cronbach’s alpha” is used to measure internal consistency reliability in social science research, but it tends to provide a conservative

measurement in PLS-SEM. In this study, researchers use SPSS software to test the reliability of the collected 472 usable questionnaire data, particularly the internal consistency reliability by obtaining the Cronbach’s Alphas for all indicator variable in predicting one another by looking into the intercorrelations among these variables (Wang et al., 2021). If the value of the Cronbach’s Alpha is nearer to 1, this shows a higher internal consistency reliability (Zheng et al., 2021). In **Table 3**, the outcomes demonstrate the Cronbach’s alpha for Economic Responsibility, Legal Responsibility, Ethical Responsibility, Philanthropic Responsibility, customer satisfaction, and repurchase intention are all above the acceptable value of 0.7 (Lan et al., 2020). The recorded value of Alpha is found to be between the least value for the Legal Responsibility of 0.8630 and the Ethical Responsibility of 0.9212. Hence, the outcomes demonstrated these variables’ score for the unwavering quality in this examination and utilized more than the preferred scores of 0.70 and their estimation scales indicate variable is steady and predictable in the estimation of all factors.

**Table 3.** Structural model specification: Cronbach’s alpha, Composite reliability and AVE and loadings of latent constructs for both formative and reflective measurements.

Measures	Constructs	Cronbach’s alpha	Composite AVE	Loadings	reliability
Formative	Economic Responsibility	<b>0.8831</b>	0.8660	0.5655	0.7508
	Legal Responsibility	<b>0.8630</b>	0.8841	0.6545	0.8093
	Ethical Responsibility	<b>0.9212</b>	0.8100	0.5868	0.7653
	Philanthropic Responsibility	<b>0.9091</b>	0.8572	0.6659	0.8160
	Customer Satisfaction	0.9021	0.8731	0.6320	0.7930
	Repurchase intention	0.8942	0.8891	0.6675	0.8153

In addition, researchers use PLS-SEM software to do the convergent validity test (Yang, 2021). Based on the above convergent validity criteria, the reliability results are given in **Table 4**. All factor loadings are significant and greater than 0.70, consistent with the guidelines of Fornell and Larcker, the average variance extracted (AVE) for each measure exceeded 0.50, so convergent validity is confirmed.

**Table 4.** Reliability and correlations for latent constructs.

Constructs	Composite reliability	1	2	3	4	5	6
1.Economic Responsibility	<b>0.8660</b>	1.0000					
2.Legal Responsibility	<b>0.8841</b>	0.6233	1.0000				
3.Ethical Responsibility	<b>0.8100</b>	0.6136	0.6235	1.0000			
4.Philanthropic Responsibility	<b>0.8572</b>	0.6245	0.6311	0.6253	1.0000		
5.Customer Satisfaction	<b>0.8731</b>	0.6021	0.6119	0.6679	0.6921	1.0000	
6.Repurchase Intention	<b>0.8891</b>	0.6774	0.6780	0.6820	0.7011	0.7342	1.0000

**Table 5** indicated that at inter-construct correlations of 0.70, the specificity rates are close to 100% in all instances. All factor loadings are significant and greater than 0.70. The data indicate that the measures are robust in terms of their internal consistency reliability as indexed by the composite reliability. The composite

reliabilities of the different measures range from 0.76 to 0.95, which exceed the recommended threshold value of 0.70.

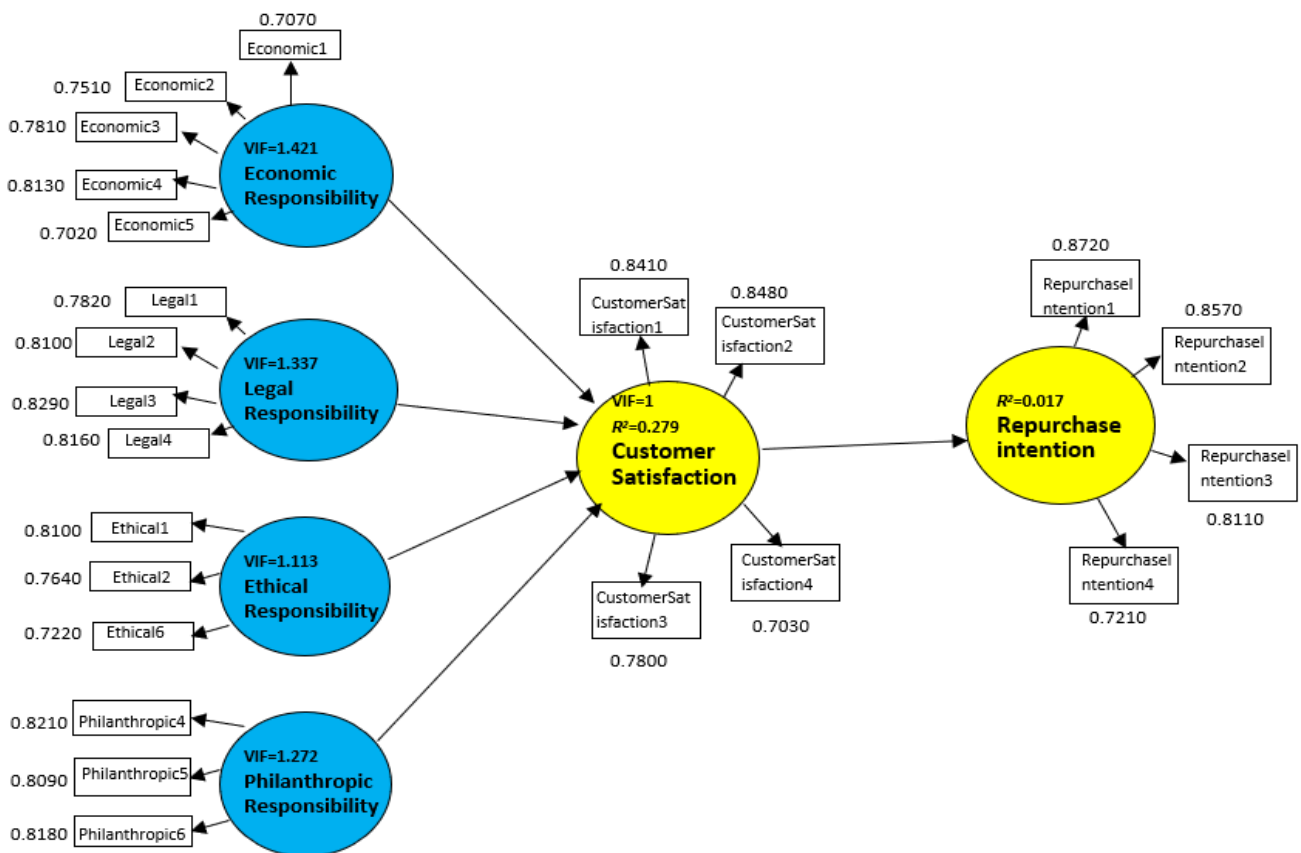
**Table 5.** Item-to-construct correlation.

<b>Construct</b>	<b>Item</b>	<b>Inter-construct correlations</b>
Economic Responsibility	Economic1	<b>0.707</b>
	Economic2	<b>0.751</b>
	Economic3	<b>0.781</b>
	Economic4	<b>0.813</b>
	Economic5	<b>0.702</b>
Legal Responsibility	Legal1	<b>0.782</b>
	Legal2	<b>0.81</b>
	Legal3	<b>0.829</b>
	Legal4	<b>0.816</b>
Ethical Responsibility	Ethical1	<b>0.81</b>
	Ethical2	<b>0.764</b>
	Ethical6	<b>0.722</b>
Philanthropic Responsibility	Philanthropic4	<b>0.821</b>
	Philanthropic5	<b>0.809</b>
	Philanthropic6	<b>0.818</b>
Customer Satisfaction	CustomerSatisfaction1	<b>0.841</b>
	CustomerSatisfaction2	<b>0.848</b>
	CustomerSatisfaction3	<b>0.78</b>
	CustomerSatisfaction4	<b>0.703</b>
Repurchase Intention	RepurchaseIntention1	<b>0.872</b>
	RepurchaseIntention2	<b>0.857</b>
	RepurchaseIntention3	<b>0.811</b>
	RepurchaseIntention4	<b>0.721</b>

For regression analysis, the evaluation of the coefficient of determination ( $R^2$ ) is the amount of variance in dependent variable that is explained by all the independent variables in the model (Hofman et al., 2021). Based on **Figure 3**, the  $R^2$  of 0.279 indicated that Economic Responsibility, Legal Responsibility, Ethical Responsibility, and Philanthropic Responsibility explain 27.9% of the overall variance of customer satisfaction. Falk and Miller (1992) opine that  $R^2$  values should be equal to or higher than 0.10 for the variance described in a specific endogenous construct to be considered sufficient. Obviously, the  $R^2$  value of customer satisfaction (27.9%) is higher, considering the moderate sufficient. The  $R^2$  of 0.017 indicated that customer satisfaction explain 1.7% of the overall variance of repurchase intention. Based on Falk and Miller (1992) opine that  $R^2$  values should be equal to or higher than 0.10 for the variance described in a specific endogenous construct to be considered sufficient. Obviously, the  $R^2$  value of repurchase intention (1.7%) is lower, considering the moderate insufficient. In statistical models,  $R^2$  (the coefficient of determination) measures how well the independent variables in the model explain the variability of

the dependent variable (Mohammed, 2024). An  $R^2$  value close to 1 indicates a strong relationship, meaning most of the variance in the dependent variable can be accounted for by the model's predictors. Conversely, a low  $R^2$  suggests that the model explains less of the variability in the outcome, leaving room for other unaccounted factors (Dauda, 2024). In this case, a low  $R^2$  for repurchase intention suggests that customer satisfaction, while important, does not fully explain the variation in customers' intent to repurchase. Specifically: Interpretation of Low  $R^2$  (Stephanie, 2024): A low  $R^2$  for repurchase intention implies that factors beyond satisfaction are likely playing a significant role in shaping a customer's decision to repurchase. Satisfaction with a product or service is a necessary but not sufficient condition for repurchase (Sahraoui, 2024). In other words, while satisfied customers are more likely to repurchase, other influences—such as price, convenience, emotional attachment, social factors, or external alternatives—might have a substantial impact. The relationship between customer satisfaction and repurchase intention may be weaker than expected (Abubakar, 2024). This could suggest that customer loyalty or future behavior is driven by a combination of elements, and satisfaction alone doesn't capture the full picture.

Only the Tolerance and VIF values showing in the "Collinearity Statistics" column are needed for this collinearity analysis. As shown in **Figure 3**, all the indicators' VIF values are lower than 5 and their Tolerance values are higher than 0.2, so there is no collinearity problem.



**Figure 3.** Results of PLS structural model analysis.

Note: \* Significant at the 0.01 level.

SmartPLS incorporates the Partial Least Squares Regression (PLS Regression) in its data analysis. The PLS Regression helps researchers explain and test the linear relationships between the identified research variables. The PLS-SEM analysis presents much fewer contradictory effects than regression analysis in terms of detecting mediation results (Sherif, 2018). This is why this research used PLS-SEM for the hypotheses testing. *T*-statistics will be generated for testing the significance of both the inner and outer model, using a procedure called bootstrapping. Using a one-tailed *t*-test (Henseler et al., 2009) with a significance level of 1%, the path coefficient will be significant if the *T*-value is larger than 2.3263; with a significance level of 5%, the path coefficient will be significant if the *T*-value is larger than 1.6449; with a significance level of 10%, if the *T*-value is less than 1.2816, it will fail to reject the null hypothesis. A *p*-value is not a negotiation if  $p > 0.05$ , the results are not significant.

Hypothesis 1–4 predict that CSR has a significant effect on customer satisfaction, and Hypothesis 5 predicts that customer satisfaction has a significant effect on repurchase intention. **Table 6** shows the results of testing research hypothesis 1–5.

**Table 6.** The results of testing the Hypotheses.

Hypothesis	Coefficient	<i>t</i> -value	Sig.	Result
H1: Economic Responsibility has a significant effect on customer satisfaction	0.13	2.424	0.008	<b>Significant</b>
H2: Legal Responsibility has a significant effect on customer satisfaction	0.057	1.142	0.127	<b>Not significant</b>
H3: Ethical Responsibility has a significant effect on customer satisfaction	0.199	4.107	0	<b>Significant</b>
H4: Philanthropic Responsibility has a significant effect on customer satisfaction	0.147	2.934	0.002	<b>Significant</b>
H5: Customer satisfaction has a significant effect on repurchase intention	0.134	2.616	0.004	<b>Significant</b>

The regression analysis of Hypothesis 1 gives a *P*-value of 0.008 (< 0.01) since the *T*-value is greater than the critical value of 2.3263, indicating a statistically significant correlation. Thus, Hypothesis 1 is accepted. The regression analysis of Hypothesis 2 gives a *P*-value of 0.127 (>0.1 ) since the *T*-value is less than the critical value of 1.2816, indicating a statistically significant correlation. Thus, Hypothesis 2 is not accepted. The regression analysis of Hypothesis 3 gives a *P*-value of 0.000 (< 0.01) since the *T*-value is greater than the critical value of 2.3263, indicating a statistically significant correlation. Thus, Hypothesis 3 is accepted. The regression analysis of Hypothesis 4 gives a *P*-value of 0.002 (< 0.01) since the *T*-value is greater than the critical value of 2.3263, indicating a statistically significant correlation. Thus, Hypothesis 4 is accepted. The regression analysis of Hypothesis 10 gives a *P*-value of 0.004 (< 0.01) since the *T*-value is greater than the critical value of 2.3263, indicating a statistically significant correlation. Thus, Hypothesis 5 is accepted.

## 5. Discussion

This study incorporates a particular investigation on independent variables and toward the dependent variable. In addition, the testing of theory was actualized in this study. This part examined and discussed the information picked up from 472

respondents in Malaysia, and additionally gathered and examination was done on that information utilizing SPSS software and PLS-SEM software. The assessment established that four corporate social responsibility activities which are Economic Responsibility, Ethical Responsibility, and Philanthropic Responsibility have a significant effect towards customer satisfaction. Only Legal Responsibility did not show any significant effect towards customer satisfaction. In addition, customer satisfaction demonstrated a significant effect on repurchase intention. In SmartPLS, the bootstrap procedure can be used to test the significance of a structural path using *T*-Statistic.

As can be seen from the previous subsection, Economic Responsibility, Ethical Responsibility, and Philanthropic Responsibility have a significant effect on customer satisfaction. Customer satisfaction has a significant effect on repurchase intention. However, Legal Responsibility does not have a significant effect on customer satisfaction. Although the results are not completely consistent with the assumptions but reflect the results obtained through data collection and analysis. These discoveries uncovered that enterprises that take Economic Responsibility, Ethical Responsibility, and Philanthropic Responsibility well, will lead a positive impact on customer repurchase intention to repurchase products.

## **6. Limitations and future research**

The sample for the research is currently limited to employees and customers in the oil and gas industry within Kuala Lumpur, Selangor and Malacca in Malaysia, which may constrain the generalizability of the findings. To improve the robustness and representativeness of the study, it is recommended to expand the sample in Geographical Expansion; Inclusion of Various Enterprise Scales; or, Stratified Sampling for future research (Aleksić, 2024). Expanding the sample in this manner will likely increase the representativeness and external validity of the findings, leading to conclusions that are more universally applicable across the Malaysian oil and gas industry.

The use of snowball sampling, while practical for reaching hard-to-reach populations, can introduce significant bias. Participants are often recruited through social networks, leading to a sample that may not be representative of the broader population (Itu, 2024). This method may over-represent certain demographics or groups with shared characteristics, such as social or cultural backgrounds (Emeka-Okoli, 2024a). Future research should aim to use randomized sampling techniques or larger, more diverse sample pools to minimize these biases and ensure broader applicability of the findings. Data collected through self-reporting may be subject to social desirability bias, where participants may present themselves in a more favorable light or withhold information. This can skew the results, particularly in sensitive areas of study (Hlima, 2023). Future studies could include more objective measures, such as behavioral observations or third-party data collection, to complement self-reported information. To address the limitations of snowball sampling and enhance the generalizability of the findings, future studies should prioritize randomized sampling methods. This would enable researchers to gather a

more representative sample and reduce potential biases, making the findings applicable to a wider audience.

Malaysia's unique economic, political, and cultural environment significantly influences CSR practices (Mirzayev, 2024). The presence of natural resources, the importance of the petroleum sector, and Malaysia's regulatory and social expectations around environmental sustainability are all factors that shape CSR behavior (Alaburo, 2024). The findings from the strength of environmental regulations, the level of public awareness regarding CSR, and the role of government policy can be generalized to other similar contextual countries or industries.

CSR practices are often built around common principles, such as sustainability, stakeholder responsibility, and ethical governance (Shah, 2024). While specific activities may vary by industry, the underlying principles of CSR, such as community engagement, environmental responsibility, and employee well-being are widely applicable across sectors (Almontaser, 2023). Thus, findings related to the positive impact of CSR on brand image or consumer loyalty in the Malaysian petroleum sector could resonate in other industries, especially those with significant public exposure or environmental concerns, such as mining, agriculture, or manufacturing.

## **7. Conclusion**

Corporate social responsibility (CSR) is an important concept of modern economic theory. The starting point of this paper is the corporate social responsibility theory. In the last few decades, corporate social responsibility has become an increasingly popular marketing tool used by companies. Consumers too want to see more CSR activities, especially those focused on environmental protection. The petroleum industry produces both toxic and non-toxic waste at almost all stages of production. While petroleum companies satisfy market demand, they also want to meet consumers' moral and ethical demands. In this light, CSR has become vital for the development of industry.

This paper looks at CSR in the petroleum industry, and its effect on consumer repurchase intention and customer satisfaction in Malaysia. This research examines CSR endeavors within the oil and gas sector and their link to consumer repurchase intention. It also looks at the established hypotheses between the activities of CSR (Economic Responsibility, Legal Responsibility, Ethical Responsibility, and Philanthropic Responsibility), customer satisfaction and repurchase intention. This paper aims to learn about consumers' sense of fulfillment with the CSR activities, and what could be the reaction base on the customer's expectations.

A novel contribution of this study lies in exploring the intersection of CSR and consumer marketing. Previous CSR literature primarily focused on the impact of CSR on corporate reputation and financial performance (Brisibe, 2024). However, the findings of this research indicate that CSR engagement now plays a central role in shaping consumer perception, particularly in the digital age where information is rapidly disseminated, and consumer expectations are evolving (Kwarto, 2022). This research extends existing theories by suggesting that CSR is not just a corporate responsibility but a critical marketing tool that enhances customer loyalty, brand



equity, and market differentiation (Lurati, 2024). This insight challenges the traditional view that CSR is merely a “cost” or “risk mitigation” effort, proposing instead that CSR can be a strategic asset with direct consumer-facing benefits.

Engage in Community-Centric Initiatives (Persson, 2023), focus CSR efforts on programs that directly benefit the communities where companies operate, such as local infrastructure development, education, and healthcare (Kim, Hwang, 2020). This enhances the social license to operate and improves consumer sentiment by demonstrating genuine commitment to community well-being. Adopt Ethical Supply Chain Practices to meet growing consumer demand for ethical sourcing (Edobor, 2024). Petroleum companies should adopt transparent and responsible supply chain practices. This includes ensuring suppliers adhere to environmental, labor, and human rights standards, as well as reducing the carbon footprint of operations. Implement Consumer Education and Engagement Campaigns (Okoye, 2024). Companies should engage consumers by educating them about their CSR initiatives, particularly in sustainability and environmental conservation. Empowering consumers with knowledge enhances the perceived value of a company’s CSR efforts and strengthens brand loyalty. Embrace circular economy principles to minimize waste and maximize resource efficiency (Ayorinde, 2024). This aligns with growing consumer demand for products and services that contribute to environmental sustainability. By focusing on these actionable recommendations, petroleum companies can build stronger relationships with consumers (Obi, 2024), align CSR efforts with evolving consumer expectations, and differentiate themselves in a competitive market. Effective implementation of these strategies will not only foster goodwill but also enhance long-term business sustainability in an increasingly eco-conscious marketplace.

Corporate social responsibility (CSR) has evolved into a key strategy for companies, particularly in industries with significant environmental and social impacts, like oil and gas (Indrawan, 2024). CSR frameworks address both the ethical obligations and the business imperatives of companies to mitigate negative externalities, engage in sustainable practices (Okoroba, 2024), and build positive stakeholder relationships. Given the scale of environmental challenges, industries with high environmental footprints are increasingly under scrutiny. The oil and gas sector, as a prime example, faces significant pressure to balance profit generation with responsible environmental and social governance (Agbarakwe Ugochukwu, 2024). By expanding on the role of CSR in sectors like oil and gas, we can better understand how large, environmentally impactful industries are adapting to the increasing demand for ethical business practices in a rapidly changing global environment.

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