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Pro-Environmental Behaviours among Frontliner Employees in Oil and Gas Industry: Does Environmental Work Culture Really Matters?

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Abstract. *This study investigates the employee perceptions of organizational environmental initiatives and their impact on pro-pro-environmental behaviors and frequency of involvement in upstream oil and gas companies in Malaysia, such as the Production Arrangement Contractor and Service Provider Company. The study also examines a new area where environmental work culture acts as a moderator. Analyzed using SmartPLS, our findings demonstrate that supervisory support for environmental initiatives and environmental training has a positive effect on employee perception of organizational support for pro-pro-environmental behaviors. In contrast, the organization's rewards for pro-environmental behaviors do not have a significant impact on it. Following this, the employees' perceptions of organizational support for pro-environmental behaviors positively affect employee engagement in pro-environmental behaviors in both forms of employees' frequency of involvement and employees' innovative pro-environmental behaviors. The findings discovered that environmental work culture moderates the relationship of the effect of the organization's support practices on employee perception of organizational support for pro-environmental behaviors. This study is one of the first attempts to investigate the relationship between the pro-environmental behaviors within the upstream firms in the oil and gas industry. The findings are useful for practitioners in terms of exerting pro-environmental behaviors and facilitating employees' pro-environmental behaviors in the upstream oil and gas management sector.*

Keywords: *Employee perceptions, pro-environmental behaviors, organizational support, work culture*

1. Introduction

Businesses have evolved today to be more complex and competitive. As firms practice various environmental management initiatives, employee engagement in pro-environmental behaviors has become one of the concerns and challenges. The question of how to encourage an employee to become engaged in pro-environmental behaviors remains a vital topic in today's global economy. Firms are searching for the answer on how to boost the motivation of their employees in engaging firms' environmental activities as they led a business of maintainability to ponder which uncovered that corporate officials chose "representative enthusiasm for supportability" as an issue that can significantly affect an organization (Berns et al., 2009; Danso, Adomako, Amankwah - Amoah, Owusu - Agyei, & Konadu, 2019). Employee recruitment and retention can be enhanced by policies and practices that stimulate employee engagement in the organization's pro-environmental behaviors.

Barbosa-Póvoa, da Silva, and Carvalho (2018) proposed comprehensive research frameworks that identify employee engagement and management needs and characteristics. It is imperative to determine the enablers of engagement in pro-environmental behaviors in energy-related sectors such as oil and gas as an environment is an essential element in the oil and gas industry. Aziz (2019) reported in The Edge Financial Daily that Petroleum Nasional Bhd had stressed its Activity Outlook 2020-2022 report that the oil and gas industry continues to transform as economic, technological, and environmental factors that change across the value chain. Huzaini, Mohammad, Othman, and Kadir. (2020) mentioned that the environment is an essential element is

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upstream oil and gas facilities as it involves high-risk activities and exposed employees with a challenging work environment. Mingliang (2020) points out that ASEAN has announced aim to guarantee more noteworthy security and provincial supplies through broadening, advancement, and preservation of assets, the proficient utilization of vitality, and the more extensive use of earth sound innovations.

Despite these essential commitments, resources, proficient, utilization, and environmental practices, there is a need for hypothetical improvement and experimental testing of elements that advance representative commitment in ecological practices (Lange & Dewitte, 2019). There is minimal hypothetical understanding for how a company's enablers of engagement in pro-environmental behaviors advance worker contribution or engagement in the behaviors including how much of the time employees participate in environmental practices, whether they take part in innovative environmental practices and whether environmental work culture moderates the relationship of the effect of organizational enablers on employee affective commitment to pro-environmental behaviors (Li, Zhao, Ma, Shao, & Zhang, 2019).

Environmental work culture is a crucial element of this study in the realm of employment, work pressure issues frequently experienced by representatives, and an effect on the worker execution. In contrast, numerous things, including workplace culture and occupation fulfillment, had influenced the workers' execution (Kazmi, Amjad, & Khan, 2008). Based on the behavioral research literature, this study employed organizational support theory as the framework to investigate the relevant practices as the enablers of engagement in pro-environmental behaviors among supervisory support, training, and reward. All hypotheses constructed are tested in the oil and gas company context, particularly in the upstream supply chain firms. This study also examined the supports that influence the perception of organizational support and subsequent influence on employee engagement in pro-environmental behaviors such as participating in the firm's environmental practices and proposing innovative environmental initiatives.

2. Literature Study / Hypotheses Development

2.1. Supervisory support for environmental initiatives

Representative duty is essential for the workers in the organizations regarding their help. Earlier research on authoritative help proposes (Farooq, Farooq, & Reynaud, 2019; Rhoades & Eisenberger, 2002) that when representatives trust associations care about them, workers get their full of feeling pledge to the organization. Bishop, Scott, Goldsby, and Cropanzano (2005) identified perceived support from two unmistakable substances: organization and group. Turban and Greening (1997) examined observational help that organizations send signs of sound qualities through their social arrangements and projects. Explicitly, they observed that free corporate social performance evaluations impacted the notoriety and subsequent engaging quality of firms.

Gilbreath and Karimi (2012) found that supervisory associations give workers an automatic chance to contribute to a full of feeling hierarchical responsibility. Representatives are allowed the chance to show support for a significant reason embraced by the association, and they are bound to display full of feeling hierarchical responsibility. Raineri and Paillé (2016) findings support the idea that when supervisory support for environmental initiatives is valued, organization members are more likely to have a responsibility to firm environmental goals, which is through the employee perception of organizational support pro-environmental behaviors. Encouragement and backing by the management staff social or natural activities is an approach to pick up organizational workers' commitment to accomplish social

upgrades. Mainly administrators are in a situation to fill the change specialist's job who encourages the coordination of manageability and CSR exercises into organization methodology, culture, structure, and conduct. The reason behind the division is because administrators give direction on how representatives ought to contribute their time and exertion. They can be initiators of hazard taking, thought age, and experimentation at work. Along these lines, Cantor, Morrow, and Montabon (2012) speculate that supervisory help can have an enormous effect if representatives perceive that their bosses give the assets and criticism to take an interest in natural activities, particularly as directors effectively cultivate a mutual vision and accord for new hierarchical practices among the workers they work with. Supervisory help can even profoundly affect representatives' work than top administration support, implying that representatives go to add to the words and activities of their immediate bosses (Cantor et al., 2012; Yu, Chavez, Feng, Wong, & Fynes, 2020). Such supervisory acts might be close to home activities to improve the activity held by the worker, or they might be coordinated toward associates as shared help among representatives. Thus, we hypothesized that:

H1: Supervisory support for environmental initiatives have a positive effect on employee perception of organizational support for pro-environmental behaviors.

2.2. Environmental training for organization

Environmental training is an essential determinant as training is an essential method by which associations secure and create human capital, which thus improves hierarchical limit and execution (Jabbour, 2015). Training programs differ broadly and some of the time have various targets, from the passing on of specialized data, to socialization, to the acknowledgment of new thoughts. Jabbour (2013) stressed how preparing could enable associations to expand their control by having workers disguise promise to association wanted destinations. The accomplishment of natural administration programs is subject to the preparation of a company's workers (Fernández, Junquera, & Ordiz, 2003; Sammalisto & Brorson 2008). Preparing programs are utilized to strengthen the significance of the association's responsibility for ecological activities (Del Brío, Fernández, & Junquera, 2007).

Choi and Hwang (2015) present ecological preparation instances, such as approaches and strategies for eco-plan, life cycle evaluation, reusing and reusing of materials, and aura of waste. For affiliations that need to declare standard exercises. Park, Sarkis, and Wu (2010) argued that ecological getting ready undertakings could help give the new standpoint and focus that delegates need to help make new eco-musings and direct. Readiness gives an unimaginable technique to improve the essential administration limits of all laborers inside the affiliation. Based on this discussion, it is evident that environmental training positively influences employee perception of organizational support. Thus, this study hypothesizes that:

H2: Environmental training provided to an employee by the organization positively affects employee perception of organizational support for pro-environmental behaviors.

2.3. Rewards for environmental behaviours

Boyt, Lusch, and Naylor (2001) examine how remunerates propel conduct and fortify employment frames of mind. They additionally bring up prizes structure signs to the worker that the association esteems, the person's commitment to the firm, free necessary leadership, proficient advancement exercises, and proficient conduct. This point of view on remunerations is particularly relevant here as associations are looking to pass on that they esteem worker commitments in the natural territory and need representatives to separately and wilfully take part in the scan for inventive answers for ecological issues.

Covin and Kilmann (1990) questioned supervisors, specialists, and advisors on issues important to fruitful authoritative

change and found that of the more than 900 issues that were raised, giving prizes to working practices that help the ideal change among the most habitually referenced. Jensen and Heckling (1995) additionally contend that it is critical to provide monetary motivating forces to representatives inside an association as an approach to adjust their matters to the objectives of the association to address specialist issues. It pursues that representatives who are remunerated for acting in manners steady with the company's fundamental objectives will see that administration bolsters eco-conduct. Rhoades and Eisenberger (2002) point out that hierarchical prizes have generally demonstrated robust associations with employee perception. Paillé and Meija-Morelos (2019) argue that organizational support maybe not always enough to encourage employee environmental performance. Rewards provided by the organization with high symbolic value (e.g., job title, favorable work location, preferred work hours) provide a way to indicate voluntary support (Nazir, Shafi, Atif, Qun, & Abdullah, 2019; Shanock et al., 2019). Thus, this study postulates that rewards provided by the company may reflect employee perception for environmental behavior.

H3: Rewards provided by the organization for pro-environmental behaviors have a positive effect on employee perception of organizational support for pro-environmental behaviors.

2.4. Employee perception of organizational support for environmental behaviours

The hierarchical approach can be utilized to analyze the connections among representative frames of mind and practices toward an authoritative objective (Aselage & Eisenberger, 2003; Tseng & Bui, 2017). This system for seeing such connections attests that representatives will follow up for an association to be a degree that the association is seen as eager and ready to respond with suitable initiative, preparing, and compensates. Cantor et al. (2012) have built up a model utilizing hierarchical help hypothesis of how worker impression of authoritative support rehearses representative impact commitment in ecological practices. The model adds to the inventory network discipline by utilizing a conduct hypothesis, authoritative help hypothesis, to address a contemporary production network the executive issue (Allaoui, Guo, & Sarkis, 2019; Qin, Harrison, & Chen, 2019).

Cantor et al. (2012) carefully incorporate hypothesis from the board and social brain research literary works to build up a model that gives bits of knowledge into how representatives are affected by company's ecological administration practices to take part in natural practices where it clarified how associations could flag the significance of the earth to workers through their hierarchical help rehearses. Understanding the organizational support theory (Caesens, Stinglhamber, Demoulin, & De Wilde, 2017; Kurtessis et al., 2017; Culver, Young, & Barnhardt, 2020) highlighted that perception of organizational support should be increased via favorable support by firms.

Besides, perception of organizational support for pro-environmental behaviors clarifies employee understanding of the extent to which the organization values the environment seeks employee involvement in pro-pro-environmental behaviors. Employees with high levels of perception of organizational support should reciprocate actively engage in the organization's behaviors or initiatives as they would feel a stronger obligation to help the organization achieve its objectives. Hence, this study comes out with the following hypotheses:

H4: Employee perception of organizational support for pro-environmental behaviors have a positive effect on employee's innovative pro-environmental behaviors.

H5: Employee perception of organizational support for pro-environmental behaviors have a positive effect on employee's frequency of involvement.

2.5. Environmental Work Culture

Culture has been asserted as a significant component of hierarchical fruitful in the business world. Associations adopt altogether different strategies to assemble quality work culture. In specific affiliations,

quality work culture is noteworthy to ensure the agents served the predominant help of the customers (Dhamija, Gupta, & Bag, 2019). The lifestyle chooses how agents delineate where they work, how they appreciate the business, and how they believe themselves to be a bit of the affiliation. In the domain of business, work weight issues as often as possible experienced by agents and affected the specialist execution, while the workers' execution was impacted by various things, including workplace culture and occupation satisfaction (Kazmi et al., 2008).

Culture is likewise a driver of choices, activities, and at last, the general execution of the association. Employee engagement in environmental behavior issues at a firm-level can be address through environmental work culture because work culture is defined by Rasool, Wang, Zhang, and Samma (2020) as work pressure issues frequently experienced by representatives, and it affected the worker execution. Organizational work culture contends the supervisors' activity (González-Rodríguez, Martín-Samper, Köseoglu, & Okumus, 2019; Hartnell, Ou, Kinicki, Choi, & Karam, 2019). Fernández et al. (2003) incorporated hierarchical culture and natural administration, underscoring the significance of authoritative culture alongside authoritative association, preparing, and inspiration. It is expressed that a successful association must have a work culture that underpins its representatives. Clear targets in terms of mission and vision will lead the association in a superior manner to accomplishment in the future.

Rachman and Sari (2019) featured work culture straightforwardly sway business fulfillment and subsequently would improve execution. In case low elements of fulfillment, it would cut down the execution. Jain and Hyde (2020) illuminated that when stress was in unusual states, work fulfillment was reduced, and when the sentiment of tension was low, then the execution would be improved. In this study, the literature support that environmental work culture has been identified as the moderator, which moderates the relationship of the effect of organizational enablers on employee perception of organizational support for pro-environmental behaviors. Environmental work culture as moderator is the examination which intrigued to look at how worker impression of the executives rehearses representative impact commitment in ecological practices, for example, taking an interest in natural administration exercises, advancing ecological activities, and proposing inventive ecological practices. Thus, we hypothesized that:

H6a: Environmental work culture moderates the relationship of the effect of supervisory support for environmental initiatives on employee perception of organizational support for pro-environmental behaviors.

H6b: Environmental work culture moderates the relationship of the effect of environmental training provided to an employee by the organization on employee perception of organizational support for pro-environmental behaviors.

H6c: Environmental work culture moderates the relationship of the effect of rewards provided by the organization for pro-environmental behaviors on employee perception of organizational support for pro-environmental behaviors.

2.6 Conceptual framework and underpinning theory

This study used employee perceptions of environmental management practices (Cantor et al., 2012), which may influence employee engagement in innovative pro-environmental behaviors and frequency of involvement in upstream oil and gas supply chain management. Rhoades and Eisenberger (2002) highlighted that organizational support theory discovered the magnitudes of perception of organizational support. An empirical test of organizational support theory has indicated that employees make every effort to repay the firm for the support given by the firm to the employee via active participation and increase in efforts to assist the firm in reaching its business goals (Aselage & Eisenberger, 2003).

Cantor et al. (2012) have built up a model utilizing hierarchical help hypothesis of how worker impression of authoritative help

rehearses representative impact commitment in ecological practices. The model adds to the inventory network discipline by utilizing a conduct hypothesis, authoritative help hypothesis, to address a contemporary production network. Cantor et al. (2012) explained the expansion use of organizational support theory empirically to other spheres by shifting of the intended target of support from the individual employee to organizational support of the environment, as perceived by the employee.

Organizational support theory contends that favorable conduct by organizations should increase the perception of organizational support. Besides, perception of organizational support for pro-environmental behaviors clarifies employee understanding of the extent to which the organization values the environment and seeks employee involvement in pro-pro-environmental behaviors. Employees with high levels of perception of organizational support should thus reciprocate by actively engage in the organization's behaviors or initiatives as they would feel a stronger obligation to help the organization achieve its objectives. A wide array of literature has been reviewed to develop the hypotheses for the current study (Figure 1).

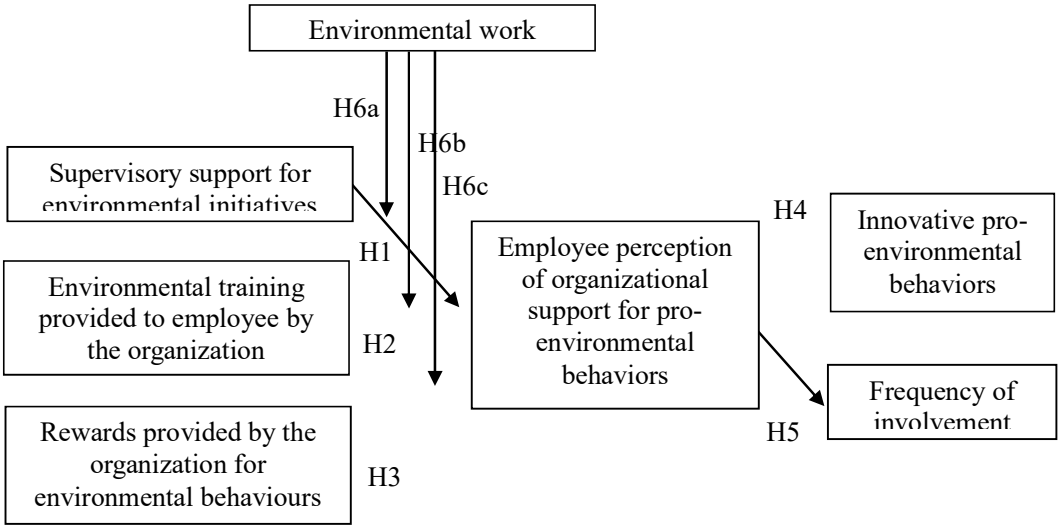

Figure 1.
Theoretical Framework

3. Methodology

3.1. Data collection

The data was collected (June to August 2019) from employees of Prudential Ampri Cleanroom Services (PACS) and service provider companies in Malaysia. The data collection was carried out using questionnaire method from the selected companies from the two main categories of companies involve in upstream oil and gas floating facilities which are Production Arrangement Contractor (PAC) and Service Provider company where the Service Provider companies are registered with PETRONAS under the SWEC code of SF2010000, which is for the work category of floating offshore facilities. Suitable inquiries were taken in the poll organization and sent to focus respondents for their input and reactions. Polls are appropriated with covering letter clarifying the motivation behind the investigation and the respondent's classification of giving the appropriate response. This will give urge respondents to certainly take an interest in the poll and

enthusiastically give exact responses to the survey. The poll strategy is a proficient information accumulation instrument when the researcher knows precisely what is required and how to gauge the factors of intrigue (Sekaran & Bougie, 2010).

The sampling size for this research was set at a total of 400 employees where 200 employees were identified for the analysis. The sampling for this research is based on stratified random sampling with the target of convenient respondents. The prospective respondents were chosen conveniently. This procedure enabled the researcher to access a sufficient number of prospective participants for this study. Questionnaires were collected using face to face survey method. We obtained approval from the senior officer of the Human Resource (HR) department of the respective company. After obtaining permission to collect data, the first author of this study went on-site to distribute questionnaires to frontline employees.

The questionnaire included a plain language statement of the project and a survey, which took around 20 minutes to complete. The respondents were assured that their involvement was completely voluntary and their anonymity guaranteed. The participants were sent the completed surveys directly to the first author. We provided an RM20 cash incentive to each employee who received our invitation to participate in this research project. A total of 400 questionnaires were administered, 340 were returned, a response rate of 85%. Since employees are always busy with their duty in the company, therefore, some participants may not be able to return the questionnaire. Of 340 returned surveys, 200 were sufficiently completed for data analysis, yielding a usable response rate of 50%. Missing data might be since respondents filled in the surveys without the help of trained investigators.

For the 200 usable samples, a total of 22.8% of respondents were from PACS and 77.2% from the Service Provider company. The respondents' firms 84.2% were Malaysia owned, 7.9% local and foreign JV Company, while the remaining 7.9% were owned by non-Malaysian. The respondents' firms 6.9% have been in the business for less than five years while the other 47.5%. The respondents' firms 13.9%, 9.9%, and 21.8% were in the business about 6 to 10 years, 11 to 20 years, 21 to 30 years, and above 30 years, respectively. The respondents' firms 15.8% having several employees less than 100 while the other 7.9%, 8.9%, 37.6% and 29.7% of respondents' firms having the number of employees from 101 to 250, 251 to 500, 501 to 1000 and more than 1000 correspondingly. The results also showed that respondents, 28.7% claimed that their firms were having all the three certified management systems (ISO 9001, OHSAS 18001/ISO 45001, and ISO 14001).

Most of the respondents' firms are certified with ISO 9001, where the percentage was 94.1%, followed by OHSAS 18001/ISO 45001 and ISO 14001 at 36.6% and 34.7%, respectively. The top three environmental management implemented by the correspondents' firms were Total Preventive Maintenance, 5S Practices, and Quality Control Circle, with a percentage of 60.4%, 43.6%, and 42.6%, respectively. Male respondents encompassed 85.1%, while female respondents covered 14.9%. A total of 69.3% were between 30 to 40 years old, followed by 14.9% were below 30 years old, 10.9% were between 41 to 50 years old, and 4.9% were 51 years old and above. Among the respondents, 66.3% were holding the positions of the executive while the other 27.7% and 6.0% were holding a position of management and senior management, respectively. Furthermore, 25.7% were working with the firms less than two years, 36.6% were working with the firms between two to five years, 22.8% were working with the firms between 6 to 10 years, and 14.9% were working with the firms more than ten years.

3.2. Measures

All items of this study were measured on a 5-point Likert scale that ranged from strongly

disagree (1) to strongly agree (5). Since we used existing scales to measure variables that were written originally in English, we used translated scales in Bahasa Malay that the literature recommends ensuring the validity of the translated scales (Stening & Zhang, 2007). We used two sets of the questionnaire and an expert on the topic who were bilingual. The translated version was pre-tested using six experts who commented on items that were difficult to understand. A minor adjustment was made to the final English and Bahasa Malay version.

Twenty four items were adapted from Cantor et al. (2012) and Boyt et al. (2001) for evaluating supervisory support for the environmental initiative, environmental training provided to an employee by the organization, and Rewards provided by the organization for pro-environmental behaviors. Based on Shanock et al. (2019) and Eisenberger, Rockstuhl, Shoss, Wen, & Dulebohn (2019), nine items were modified for assessing employee perception of organizational support for pro-environmental behaviors. Environmental work culture was measured using six items adapted from Iranmanesh, Zailani, Hyun, Ali, and Kim (2019). Thirteen items were adapted from Montabon, Sroufe, and Narasimhan (2007) and Cantor et al. (2012) for evaluating innovative pro-environmental behaviors and frequency of involvement.

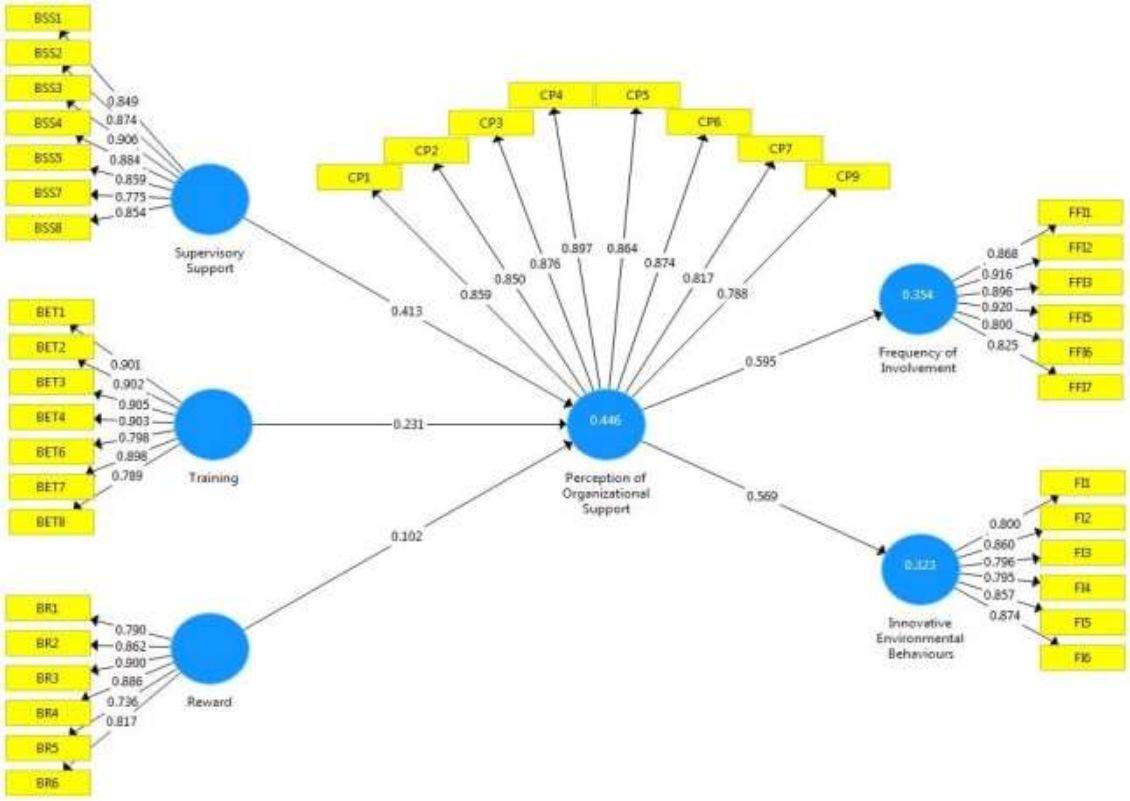

Figure 2.
Results of Measurement Model.

3.3. Test of common method bias

In this study, we have used several procedures for measuring the common method bias. In the period of distribution questionnaires, we followed the recommended procedure to provide statements to respondents that the current study will use only study purpose, responses

were confidential and there was no correct and wrong response. The study also used Harman's one-factor test to identify the problem of common method bias. Factor analysis was used on seven factors whose eigenvalues were above 1. The first estimated 33.12% of the total variance, and with all factors accounting for 69.23% of the total variance, which indicates that common method bias is not an issue in the data.

4. Findings and Discussion

4.1 Measurement model

We have used SmartPLS 3.0 to assess the model. A two-step process is applied to test the hypotheses relationship in the proposed conceptual model of this study (Kline, 2015). In the first step, we have applied confirmatory factor analysis (CFA) to analyze the convergent validity using a series of tests that compared the measurement model. In the second step, we have measured the hypothesized relationship to assess the fit of the structural model. The results of the first step analysis are shown in Table 1. (see in appendix)

Internal reliability is evaluated using Cronbach's alpha value, which ranged from 0.910 to 0.951 and greater than 0.70, indicating adequate reliability (Hair, Ringle, & Sarstedt, 2013). Convergent validity is achieved since factor loadings are significant and above 0.60 (ranged from 0.736 to 0.932, average variance extracted (AVE) exceed 0.50 (ranged from 0. 690 to 0.803 and composite reliabilities are greater than 0.60 (ranged from 0.930 to 0.961) (Fornell & Larcker, 1981). The results of the measurement model are shown in Figure 2. Discriminant validity is achieved if the values surpass 0.85 or 0.90 (Fornell & Larcker, 1981). Heterotrait-Monotrait Ratio (HTMT) value 0.85 is a stringent criterion than the 0.90.

4.2 Structural model and hypotheses test

The assessment of the structural model involved a coefficient of determination (R2) and path coefficient. R-square value elucidates the endogenous constructs using its amount of variance as explained by the exogenous constructs. It implies that a greater value of R2 will escalates further the structural model of its predictive ability. The findings showed in Table 2 that all the construct's values are lower than the stringent value of HTMT (0.85), which indicates that the discriminant validity of the model is ascertained. The bootstrapping function is used to gain the t-statistic values.

Table 2.
Discriminant Validity (HTMT)

Constructs	FII	FI	CP	BR	BSS	BET
Frequency of Involvement (FFI)						
Innovative Environmental Behaviour (FI)	0.831					
Employee perceptions (CP)	0.622	0.599				
Reward (BR)	0.672	0.631	0.562			
Supervisory Support (BSS)	0.703	0.654	0.652	0.698		
Training (BET)	0.685	0.645	0.589	0.785	0.684	
HTMT: Heterotrait-Monotrait Ratio						

The findings revealed that the perception of organization support explained 35.4% and 32.3% of the variance in frequency of involvement and innovative environmental behavior respectively. The idiosyncrasy of supervisory support, training, and reward together explain 44.6% of the variance in perception of organizational support. We used t-statistics for all the paths to examine

the significance level where the t-statistics were created using the bootstrapping 5,000 samples. The output of t-statistics and p-value determined the significance level of each connectivity between constructs.

About the path coefficient analysis, the supported hypotheses are showing t-value ≥ 2.32 considers a significant level at 0.01 and t-value ≥ 1.64 considers a significant level at 0.05. Referring to the results presented in the structural model (Figure 3), it is revealed that H1, H2, H4, and H5 are significant while H3 is not significant.

From the analysis and in terms of employees' perception, it reveals that supervisory support for environmental initiatives have a high impact on employee perception of organizational support for environmental behaviors (β=0.413, t=3.301, (p< 0.01), while environmental training provided to an employee by the organization have a significant relationship with employee perception of organizational support for pro-environmental behaviors (β=0.231, t=2.188, p< 0.05), but rewards provided by the organization for pro-environmental behaviors do not seem to have significant effect on employee perception of organizational support for pro-environmental behaviors (β=0.102, t=0.946, p > 0.05), supporting hypothesis H1 and H2 and not supported H3.

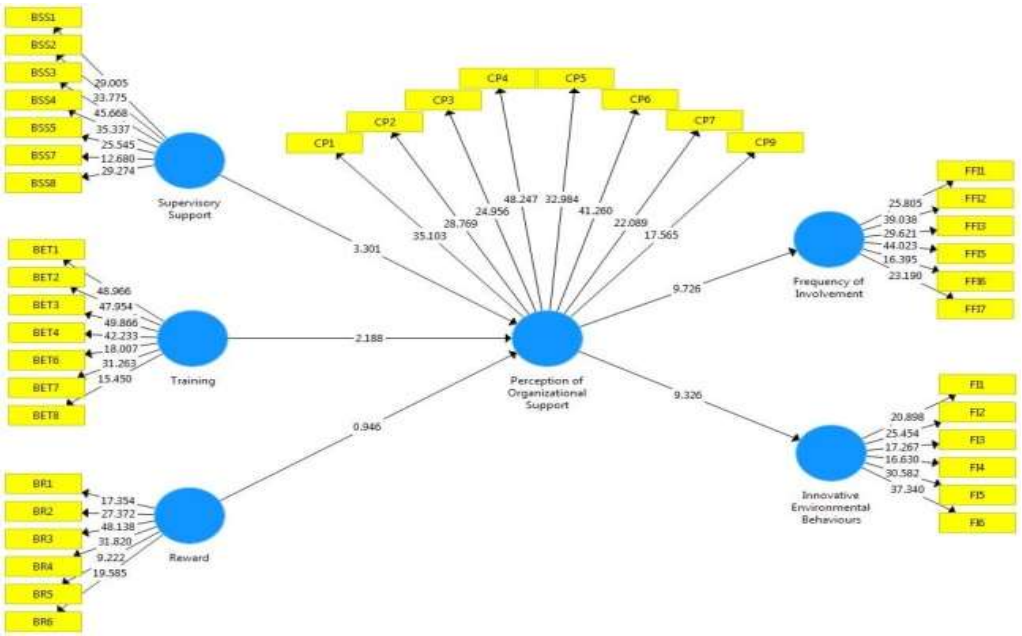

Figure 3.
Structural Model

The results also indicate that employee perception of organizational support for pro-environmental behaviors have a strong significant effect on employee's innovative environmental behaviors (β=0.569, t=9.326, p< 0.01) and on employee's frequency of involvement (β=0.595, t=9.726, p< 0.01), indicating hypotheses H4and H5 are supported.

In terms of moderating effect, environmental work culture (EEWC) moderates the relationship of the effect of supervisory support for environmental initiatives (BSS) on employee perception of organizational support for pro-environmental behaviors (CP) (β=0.117, t=1.651, p< 0.05). The results also indicate

that EEWC moderates the relationship of the effect of rewards provided by the organization for pro-environmental behaviors (BR) on CP (β=0.132, t=1.672, p< 0.05), while EEWC does not moderate the relationship of the effect of environmental training provided to an employee by the organization (BET) on CP (β=0.009, t=0.118, p > 0.05). Hence, it is concluded that hypothesis H6a and H6c are supported respectively but H6b is not supported. The summarized results are shown in Table 3.

Table 3.
Hypothesis Results
Note: t-value ≥ 2.32 considers significant level at 0.01 and t-value ≥ 1.64 considers significant level at 0.05.

Hypothesis	Relationship	Path Coefficient (β)	T-statistics	P-values
H1	Supervisory Support → Perception of Organizational Support	0.413	3.301	0.001*
H2	Training → Perception of Organizational Support	0.231	2.188	0.029*
H3	Reward → Perception of Organizational Support	0.102	0.946	0.344
H4	Perception of Organizational Support → Innovative Environmental Behaviours	0.569	9.326	0.000*
H5	Perception of Organizational Support → Frequency of Involvement	0.595	9.726	0.000*
H6a	Moderating Effect 1 → Supervisory Support and Perception of Organizational Support	0.117	1.481	0.139*
H6b	Moderating Effect 2 → Training and Perception of Organizational Support	0.009	0.118	0.906
H6c	Moderating Effect 3 → Reward and Perception of Organizational Support	0.132	1.672	0.095*

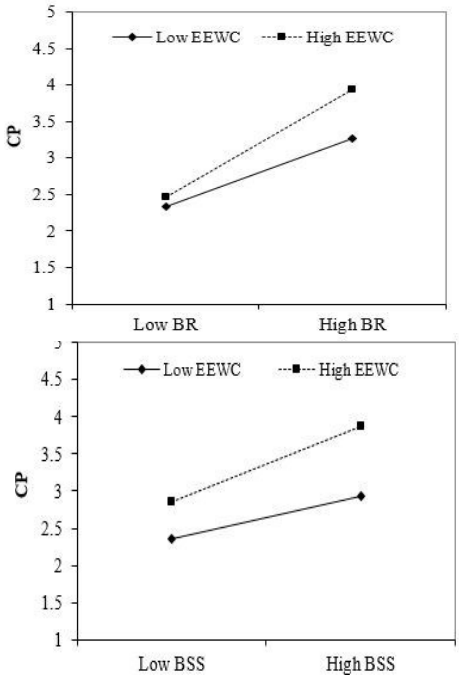

Figure 4 and 5.
Moderating Effects.

Based on Figure 4, it demonstrates that the relationship is stronger when EEWC is high than when it is low. The interaction term was significant at 0.05. We show this moderating effect of EEWC on the relationship between BSS on CP. Similarly, Figure 5 demonstrates that EEWC moderated the effect of rewards provided by the organization for pro-environmental behaviors on employee perception of organizational support for pro-environmental behaviors (at 0.05 significant level) such that the relationship is stronger when EEWC is high than when it is low. Therefore, the data support H6a and H6c.

5. Conclusion

Pro-environmental behaviors remain an interesting topic since business landscape requires firms to continuously involve in environmental initiatives. The success of those initiatives is reliant on its employee's engagement. Upstream oil and gas companies in Malaysia, such as the Production Arrangement Contractor and Service Provider Company, also set their eyes on the behaviours initiations.

Drawing upon behavioral research literature, this research used organizational support theory as the framework to investigate what are the organization support practices as the enablers of engagement in pro-environmental behaviors among supervisory support, training and reward that influence perception of organizational support and subsequent influence employee's engagement in pro-environmental behaviors such as participating in firm's environmental practices and proposing innovative environmental initiatives.

The study carried out a further examination in new areas where environmental work culture has been introduced as a moderator between enablers of engagement in pro-environmental behaviors and employee perception of organizational support for pro-environmental behaviors. The theoretical model was evaluated using a sample of employees employed either by the Production Arrangement Contractor (PAC) and Service Provider Company where the Service Provider companies are registered with PETRONAS under the SWEC code of SF2010000 which is for the work category of floating offshore facilities.

The research findings demonstrate that supervisory support for environmental initiatives and environmental training provided to an employee by the organization have a positive effect on employee perception of organizational support for pro-environmental behaviors. However, rewards provided by the organization for pro-environmental behaviors do not have a positive effect on employee perception of organizational support for pro-environmental behaviors. The study also proved that employee perception of organizational support for pro-environmental behaviors has a positive effect on employee engagement in pro-environmental behaviors in both forms of employees' frequency of involvement and employees' innovative pro-environmental behaviors. The findings discovered that environmental work culture moderates the relationship of the effect of all the organization support practices (supervisory support for environmental initiatives, environmental training provided to an employee by the organization and rewards provided by the organization for environmental) on employee perception of organizational support for pro-environmental behaviors.

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Appendix

Table 1.
Convergent validity

Dimension and Indicators	Code	Drop item	Loading	AVE	CR	C-α
Supervisory Support	***(BSS)***				***0.737***	***0.951***	***0.940***
My supervisor directly encourages me to work on eco-initiatives	BSS1		0.849				
When engaging in eco-initiatives activities, my supervisor is very supportive	BSS2		0.874				
My supervisor provides me with useful advice related to eco-initiatives	BSS3		0.906				
I find my supervisor very helpful in performing eco-initiative activities	BSS4		0.884				
I trust my supervisor capability in executing the eco-initiative activities	BSS5		0.859				
My supervisor neglects me as the importance of human capital for eco-initiatives Activities	BSS6	drop	0.464				
My supervisor ensures strong participation and commitment from me all the time	BSS7		0.775				
My supervisor ensures the objectives of eco-initiatives are clear and readily understood by me in taking actions and responsibility	BSS8		0.854				
Training	***(BET)***				***0.761***	***0.957***	***0.947***
I have received training related to environmental issues (e.g., global warming)	BET1		0.901				
I have received training related to environmental management practices	BET2		0.902				
I have received training related to environmental tools/techniques	BET3		0.905				
I have received training related to the environmental information systems development such as green purchasing and green supplier management	BET4		0.903				
My firm cannot make rapid IT change while assigning me to conduct environmental management systems	BET5	drop	0.445				
My firm provides me with modern and computer-assisted environmental tools and techniques	BET6		0.798				
My firm conducts continuous training for me to gain more information about my environmental-related work	BET7		0.898				
My firm enhances my competency with appropriate education, training, skills, and experience	BET8		0.789				
Reward	***(BR)***				***0.695***	***0.932***	***0.911***
I am recognized for keeping up with the latest environmental developments in my field	BR1		0.790				
I am rewarded for performing work that has a positive environmental impact on both the firm and society	BR2		0.862				
I am recognized for exhibiting positive attitudes toward my company's environmental objectives	BR3		0.900				
My firm appreciated me by providing incentives when I have solved issues related to environmental problems	BR4		0.886				
My firm hires appropriate personnel in helping me in solving the environmental management issues	BR5		0.736				
I have been acknowledged for my skills and experience in meeting the company's overall environmental objectives	BR6		0.817				
Employee perception of organizational support	***(CP)***				***0.729***	***0.955***	***0.947***

My firm is willing to assist employees in solving environmental problems	CP1		0.859			
Help is available in my firm when environmental problems arise	CP2		0.850			
My firm is willing to extend itself to solve an environmental problem	CP3		0.876			
My firm motivates employees to improve innovation and customer satisfaction on environmental initiatives	CP4		0.897			
My firm inspires employees to reduce the number of complaints on environmental problems	CP5		0.864			
My firm excites in identifying customer needs on environmental initiatives	CP6		0.874			
My firm demands to enhance customer and supplier's commitment to legal Quality, Environment, & Safety	CP7		0.817			
My firm disregards customer and supplier pressures on quality and environment requirements	CP8	drop	0.484			
My firm ensures mutual beneficial relationships between the company and the customer- supplier	CP9		0.788			
Environmental Work Culture	***(EEWC)***			***0.803***	***0.961***	***0.951***
Meaningful incentives that reward eco-initiatives progress are in place	EEWC1		0.841			
A non-blaming, performance-oriented, process-driven organizational atmosphere exists	EEWC2		0.896			
There is regular, direct personal involvement by senior management with operating workforce concerning eco-initiatives	EEWC3		0.909			
Management encourages work area eco-initiatives for continuous improvement knowledge and skills	EEWC4		0.884			
The organization's senior managers are actively leading the deployment of eco- initiatives	EEWC5		0.932			
Eco-initiatives targets are defined and have been effectively communicated	EEWC6		0.912			
Innovative Environmental Behaviour	***(FI)***			***0.690***	***0.930***	***0.910***
I look for opportunities to reduce pollution from work-related activities	FI1		0.800			
I actively research solutions to my company's environmental problems	FI2		0.860			
I am highly motivated to replace materials with those that are more environmentally friendly	FI3		0.796			
I champion the use of energy conservation efforts in my department	FI4		0.795			
I demonstrate good time management by delivery of a good quality audit on time	FI5		0.857			
I deliver firms' eco-initiatives against the environmental plan	FI6		0.874			
Frequency of Involvement	***(FFI)***			***0.760***	***0.950***	***0.936***
I often thinking of eco-initiatives ideas that would benefit the firm and society	FFI1		0.868			
I often shared formal eco-initiative ideas with others	FFI2		0.916			
I easily communicated ideas on eco-initiatives to my supervisors	FFI3		0.896			
I had problems in persuading my team to be dedicated to work-related with the eco- initiative	FFI4	drop	0.357			
I always shared the success of the implementation of any eco-initiatives with my Colleagues	FFI5		0.920			
I often submitted eco-initiative proposals to my management for their considerations	FFI6		0.800			
I will always be loyal to any of eco-initiatives project been assigned to me	FFI7		0.825			

Note: AVE: Average Variance Extracted; CR: Composite Reliability; C-α: Cronbach's alpha.