



## **The Antecedents of Managers' Environmental Management Practices and Financially Responsible Behaviour: Examining Managers' Behaviour in Malaysia's Environmentally Sensitive Industries**

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### **ABSTRACT**

There has been an increasing focus on improving pro-environmental intentions and behaviour. This study has primarily assessed a conceptual model focusing on managers' intentions and financially responsible behaviour. This study examined the direct influence of; managers' attitudes, subjective norms, perceived behavioural controls, and religiosity in inducing their intentions to perform pro-environmental practices, leading them to conduct financially responsible behaviour in preserving the environment. This conceptual study employed a quantitative approach and was supported by interviews to understand the findings better. A partial least squares structural equation modelling technique was adopted in analysing and interpreting the data. Data were collected from environmental and financial managers in Public Listed Companies (PLCs) using a survey design questionnaire. Specifically, responses were sought from managers from environmentally sensitive industries. Interviews were conducted to understand managers' behaviour better. The findings of this study revealed that; subjective norms, pressures, and religiosity positively and significantly influenced managers' intentions to perform pro-environmental practices. However, these intentions did not lead them to execute financially responsible behaviour in preserving the environment. This study's findings exposed the need for managers to have business and government support to make preserving the environment mandatory and be financially responsible for preserving the environment.

**JEL Classification:** M12, M41

**Keywords:** Pro-environmental intentions; Financially responsible behaviour; Managers; Theory of Planned Behaviour; Malaysia

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*Article history:*

Received: 12 July 2022

Accepted: 7 December 2022

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DOI: <http://doi.org/10.47836/ijeam.16.3.02>

© International Journal of Economics and Management. ISSN 1823-836X. e-ISSN 2600-9390.

## INTRODUCTION

The continuous rise in commercial activity has gradually increased the demand for environmental sustainability and preservation. Major environmental threats are rooted in heavily polluted business practices that have led to major disasters, such as; global warming, the overconsumption of resources, unsustainable land practices, and the loss of habitats (Burns, 2012; Mahi, 2021). To resolve environmental issues, governments and non-governmental organisations (NGOs) worldwide have made numerous efforts to enact; policies, standards, and initiatives to promote a sustainable environment (Sharma and Bansal, 2013). The United Nations, for example, has developed 17 key strategies for promoting sustainable development goals (SDGs) among communities around the world. The SDGs' main missions are to; preserve the environment, ensure effective economic performance, and achieve sustainable social development (Hossain et al., 2017). Understanding the benefits of the UN's SDGs, the Malaysian government has also executed practical measures to curb environmental degradation. In Malaysia, there has been a long history of environmental pollution and ecological degradation. Problems such as; landslides, flooding, forest fires, resource depletion, and the excessive use of land are examples of activities that have endangered habitats to the detriment of the country's way of life. These environmental problems have been due to organisations overemphasising economic growth (Begum et al., 2015).

Nevertheless, environmental problems have not been mitigated; rather, they have intensified (Thieme et al., 2015). Movements to better the environment are currently viewed as a real challenge in Malaysia, as industrial practices and social activities remain incongruent with environmental sustainability (Yusof et al., 2017). These issues have pushed researchers to explore the extent to which organisations have responded to such environmental issues.

Many studies have focused on organisational behaviour. Hence, this study focused on managers' intentions and behaviour. According to Davis et al. (2011), no matter how much organisations commit to improving pro-environmental activities, ultimately, they will still rely on their managers' behaviour in many decisions (Supriyanto et al., 2020). This reliance is because managers determine environmental policies, and the level of training and motivation for the betterment of the environment are determined by the management (Govindarajulu and Daily, 2004, Bhattacharyya et al., 2020). Hence, managers who believe in preserving the environment and are willing to invest in environmental activities can change their organisations' environmental conduct. Specifically, managers' interventions could cause an organisation to focus on the benefits of preserving the natural environment and would extend their efforts to achieve this goal (Nisar et al., 2021).

This study has, therefore, contributed to the current pool of knowledge relating to environmental behaviour by focusing on managers' financially responsible behaviour. It is significant for organisations to identify and understand managers' views and actions when confronted with financial issues and how such financial decisions could affect their behaviour.

The remainder of this paper is organised as follows; the first section reviews the existing literature and is followed by information regarding environmental practices in Malaysia. The subsequent section provides the study's theoretical framework and discusses the hypotheses development. Section three provides the study's methodology. The results of the structural modelling are presented next, with a discussion in Section six. Finally, the paper concludes with limitations and recommendations for future study.

## LITERATURE REVIEW

This study defined managers' actions that support environmental practices as environmentally responsible behaviour. Specifically, this study adopted Russell and Griffiths's (2008) definition of environmental behaviour. Russell and Griffiths (2008) defined environmental behaviour as 'any action taken by employees that they think would improve the environmental performance of the company.' This study adopted this definition because it marks the difference between individual-level observable factors from organisational-level constructs by focusing on managers' actions rather than organisational requirements. Since managers have a significant influence on organisational performance, managers' behaviour, thus, plays a major role in realising pro-environmental practices. Specifically, managers' financially responsible behaviour refers to

managers' actions in managing financial issues that will contribute toward adopting environmental preservation activities in their organisations.

Organisations' pro-environmental practices, at present, are largely unregulated. This situation has made it vital for organisations to understand the importance of protecting the environment via the effective implementation of pro-environmental practices (Yusof et al., 2016). Specifically, such practices focus on organisations' responsibilities to; minimise waste, reduce energy consumption, manage freshwater resources effectively and reduce hazardous material usage, to name a few. Incorporating these activities can help organisations minimise environmental destruction.

Horvathova (2010) found a negative association between environmental practices and financial performance. The study suggested that more timely consideration would be needed to achieve a positive link between environmental and financial performance. This finding was supported by Hang et al. (2018), who observed that environmental practices could improve organisational financial performance if such activities were conducted for more than a year. Hence, managers are encouraged to proactively preserve the environment while acknowledging that financial success is not immediately visible. However, research by Albertini (2013) observed that there was a positive relationship between Corporate Environmental Practices (CEP) and Corporate Financial Practices (CFP). According to the study, many organisations viewed environmental practices as integral to saving costs, as such practices could; reduce energy consumption, encourage the recycling of materials, and decrease the use of resources (Albertini, 2013). These activities offer organisations better opportunities to improve their financial performance.

Baah et al. (2021) also reported a positive relationship between environmental responsibilities and cost-based competitive advantage. Adopting environmental practices can cause organisations to implement cleaner activities, such as reducing energy consumption and waste, leading to decreased pollution management and storage handling costs. These practices can help organisations to achieve better financial performance through savings. Therefore, organisations should look to broader approaches to business practices that increase financial benefits.

Most of the above studies have focused on organisational practices rather than managers' behaviour. Hence, further studies should focus on managers' behaviour in managing the environment, specifically financially responsible behaviour. The following discussion focuses on managers'; values, attitudes, subjective norms influences, and perceived behavioural control factors.

There has been overwhelming evidence demonstrating the applicability of attitude in predicting behaviour (Greaves et al., 2013; Farooq et al., 2022). It has been observed that managers' values to preserve the environment could drive their intentions to adopt appropriate organisational environmental practices (Zhang et al., 2015). Many studies have indicated that managers have positive attitudes toward preserving the environment (Sheng and Chen, 2010; Greaves et al., 2013). A possible reason could be that they are aware of global warming issues and the need for their organisations to be sustainable (Gholami et al., 2013). Hence, such good attitudes could encourage implementing environmental practices in their organisations.

However, some studies have noted that managers with good attitudes toward protecting the environment have also faced difficulties in exhibiting these attitudes in an organisational context (Wang et al., 2015; Swaim et al., 2016). This situation could be due to their organisations' limited attention to preserving the environment (Sheng and Chen, 2010). Such a lack of attention causes managers to perceive that these issues are too complex and that it would be difficult for them to change their business systems and production processes to accommodate these practices. In addition, previous studies have tended to depict environmental attitudes based on broad assumptions. Hence, a more detailed study is needed to understand better managers' environmental attitudes and the outcomes of their approaches to organisational environmental practices.

In the reviewed literature, managers typically believed that subjective norm requirements could influence their perceptions of how they should behave (Ye et al., 2013; Swaim et al., 2016; Wesselink et al., 2017). Most studies analysing managers' behaviour in preserving the environment have cited subjective norms as a determining factor. For instance, Swaim et al. (2015) and Wesselink et al. (2017) focused on the public, such as; key stakeholders and friends. Similarly, Srivastava et al. (2020) only investigated the influence of institutional pressures and how they could influence managers' behaviour. These studies observed that institutional pressure influenced decisionS to perform environmental practices. In addition, Ahmad et al. (2021) focused on the government, while Wang et al. (2015) highlighted the influence of consumers and employees. In short, there remains a need to focus on a larger context that includes most of the above-

mentioned external parties. This way, the individuals or groups of managers most likely to follow suit can be identified. Hence, before managers decide how to deal with environmental pressures, they need to identify the sources of pressure that most influence their decision-making processes.

Perceived Behavioural Control (PBC) signifies an individual's belief concerning their ability to perform the desired behaviour. Many studies have incorporated their components to represent this concept. Several studies have focused on task-related commitments and job satisfaction. For example, Greaves et al. (2013) focused on self-efficacy in performing an intended behaviour, while Swaim et al. (2016) examined supply chain managers' abilities. In the study, managers' ability referred to personal conduct to uphold environmental activities (Swaim et al., 2016). These studies proved that it has been essential for managers to have a firm belief in their abilities to conduct sustainable projects and implement practices that encourage proper, environmentally reliable behaviour. Generally, it has been acknowledged that each study has a unique definition of PBC. Hence, the current study focused on the effect of economic issues on preserving the environment. There has been minimal research on the organisational and economic objectives of managers' PBC in conducting financially responsible behaviour and environmental preservation. Therefore, this study aimed to fill this gap by focusing on managers' economic objectives to determine the important economic goals that could inhibit or encourage managers to be environmentally responsible.

The relationship between religion and the environment has attracted much attention in academic literature. Many studies have shown that religious values influence people and cause them to adopt ethical (environmental) intentions and behaviour (Kamla et al., 2006; Du et al., 2014). However, to date, there has been no clear evidence of a relationship between managers' religiosity and their financially responsible behaviour in preserving the environment. The lack of studies on managers' religious values and behaviour motivated the present study to address this gap. This study has focused on all religions and examined whether managers' financial responsibility was consistent with their religious principles in preserving the environment.

In summary, based on the review of the selected literature conducted in this study, there remain some gaps in knowledge concerning managers' intentions and financially responsible behaviour. Most prior research on environmental practices has focused on organisational activities; hence this study has broadened this perspective by analysing managers' financial behaviour that could impact their actions to preserve the environment. The findings could help managers determine the influence of financial responsibility on their decision-making processes in preserving the environment. Another reason for focusing on financially responsible behaviour was the importance of financial performance, which is an organisation's main objective (Sueyoshi & Goto, 2010). Hence, this study addressed the gap in this field by exploring the influence of behavioural beliefs on the financially responsible behaviour of managers. The next section discusses the theory used in this study and the hypotheses development.

## **THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT**

Acknowledging that some behaviour may not be under an individual's complete control, the Theory of Planned Behaviour (TPB) was developed (Ajzen, 1991; 2012). The TPB has been widely and successfully used to discuss the antecedents that influence behaviour (Ajzen 1991; 2012). However, in workplace settings, the TPB has only been used occasionally (Wesselink et al., 2017). This issue raises the need to understand managers' behaviour in workplace settings better. Specifically, this study focused on managers' financially responsible behaviour. According to the theory, managers' behaviour is known to be influenced by factors that determine their actions. If a) they believe that personal expectations and stakeholders view such behaviour as an important issue, b) the expected resources and opportunities are available for them to perform the behaviour, and c) they feel obligated to fulfil their religious beliefs that it is important to protect the environment, then, they will behave accordingly. Generally, this study has focused on identifying important antecedents influencing managers' willingness (intention) to conduct financially responsible behaviour in preserving the environment.

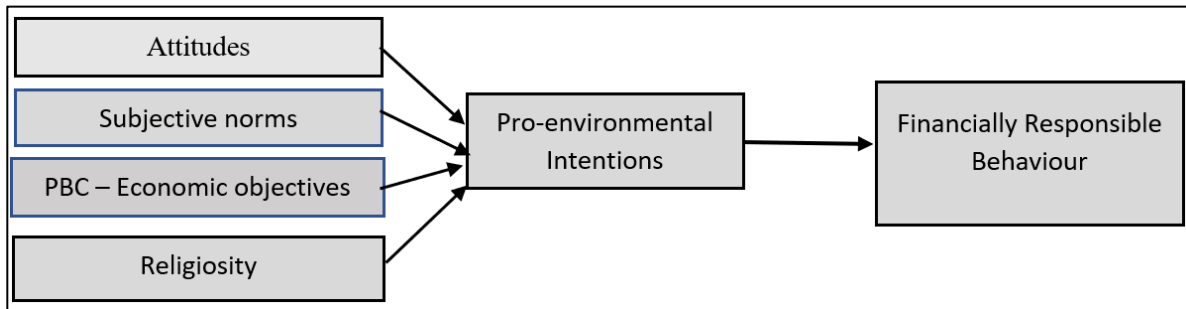


Figure 1 Financially Responsible Behaviour model

Attitudes assess the possibility of certain actions and evaluate the probability of achieving a behaviour (Kaiser et al., 1999). Managers' attitudes towards the environment are one of the main factors that are essential in determining managers' intentions and behaviour. The factor is essential because managers' values are directly associated with their ethical performance (Trevino et al., 2000). Managers who are conscious of threats to the environment are known to be more protective than managers who are unaware of the possible detrimental effects caused by their organisations (Leszczynska, 2010). In addition, managers with personal environmental ethics that identify their role as responsible for protecting the environment have a stronger will to protect the natural environment (Wesselink et al., 2017). Many researchers have shown that environmental attitudes predict behaviour (Kaiser et al., 2007). However, not all studies have supported this prediction. Hence, this study focused on managers' pro-environmental attitudes through the following hypothesis:

*H1: There is a positive relationship between managers' attitudes and pro-environmental intentions.*

Subjective norms (SN) have been acknowledged to have the ability to control organisations' valuable resources. Therefore, perceptions could influence managers' decisions. As noted by Swaim et al. (2016), the demands of subjective norms increase managers' social awareness and stimulate their need to conform to environmental protection practices. This finding has been further supported by empirical evidence that managers have to believe that external pressures, such as; from regulators, customers, and suppliers, are important enough for them to take up environmental practices (Zhang et al., 2015; Lacap et al., 2021). Given the above discussion, organisations must have responsible managers that protect the environment. Managers who believe that they must be attentive in fulfilling their subjective norms and requirements could be more likely to contribute better to performing their organisation's environmental practices (Barraquier, 2011). Accordingly, the following hypothesis was addressed:

*H2: There is a positive relationship between managers' subjective norms and pro-environmental intentions.*

Perceived Behavioural Control (PBC) has been noted as an important determinant in the TPB. It refers to managers' perceptions regarding the simplicity or complexity of performing an expected behaviour (Ajzen, 1991). Therefore, when managers believe they have little control over performing an expected behaviour due to scarcity of resources, there is the possibility that they would not perform the behaviour. Nevertheless, when managers are confident that they can perform, they would be highly motivated to accomplish the behaviour. In this study, PBC referred to managers' responsibility to achieve the economic objectives of their organisations. A higher perception of control in managing economic objectives may accelerate managers' ability to conduct pro-environmental practices. Therefore, managers who believe that pursuing environmental practices may lead to better economic performance for their organisations will have a higher intention to perform these practices. Therefore, the following hypothesis was developed:

*H3: There is a positive relationship between managers' perceived behavioural control in meeting the organisation's economic objectives and managers' pro-environmental intentions.*

Limited discussions have taken place concerning the relationship between religiosity and pro-environmental intentions and behaviour (Weaver and Agle, 2002). Religiosity is believed to have a possible influence on managers' ethical awareness, judgement, and conduct. The effectiveness of preserving the environment relies on managers' perceptions of preserving the environment (Paille et al., 2014). The important issue is whether managers are influenced by their religiosity when managing the environment. Numerous faiths and religions have different beliefs regarding certain issues. However, despite these differences, many religious beliefs share a fundamental principle concerning the importance of preserving the environment (Biscotti and Biggart, 2014). Many religions recognise that humans are essential in making good and better choices (White, 2010). Religiosity is a powerful agent in encouraging managers to show their pro-environmental intentions. Hence, the following hypothesis was developed:

*H4: There is a positive relationship between managers' religiosity and pro-environmental intentions.*

Environmental performance can be categorised into environmental and financial performance (Henri and Journeault, 2010). Environmental performance indicates the degree to which practices exceed the standards required by the laws and regulations in addressing environmental issues. Financial performance indicates the monetary consequences of better cost reduction. Hence, in this study, managers' behaviour focused on financial performance, defined as the impact of the managers' actions in performing financial activities. Ones and Dilchert (2012) highlighted that organisational performance could be associated with managers' behaviour, as environmental performance indicated managers' commitment to preserving and protecting the environment. Better financial performance could assist in reducing organisational costs arising from pollution management charges and energy consumption, which, at the same time, leads to an increase in organisational profit (Schaltegger and Synnestvedt, 2002). Therefore, effective environmental management could push organisations toward; better pollution reduction processes, increased customer recognition, and increased competitiveness in international markets (Lopez-Gamero et al., 2009). Following this reasoning, financial performance relating to pro-environmental activities will reflect the behaviours and practices of managers in protecting the environment.

Specifically, this study predicted that managers with honest intentions to preserve the environment would also be more likely to behave financially responsibly. Hence, the following hypotheses were developed:

*H5: Managers' pro-environmental intentions will positively mediate the relationship between managers' attitudes and financially responsible behaviour.*

*H6: Managers' pro-environmental intentions will positively mediate the relationship between managers' SN and financially responsible behaviour.*

*H7: Managers' pro-environmental intentions will positively mediate the relationship between managers' PBC and financially responsible behaviour.*

*H8: Managers' pro-environmental intentions will positively mediate the relationship between managers' religiosity and financially responsible behaviour.*

## METHODOLOGY

The sequential method was employed in this study. It is a methodology that involves collecting and analysing quantitative data via surveys, followed by interviews, representing the qualitative method. The quantitative method was first designed to solve the study's questions based on the hypothesised relationships developed from the theory and related literature. Subsequently, this phase was followed by the interview phase. Semi-structured interviews were conducted to support further and comprehend the quantitative findings. These interviews were guided by structured interviews, followed by sub-questions if the respondents' responses required further clarification (Guest et al., 2006).

Structured questionnaires were sent to managers selected from various industries listed on Bursa Malaysia, particularly organisations that engaged in environmentally sensitive sectors. A study by Spencer et al. (2013) highlighted that not all managers focused on environmental issues. Spencer et al. (2013) suggested that only Chief Financial Officers (CFOs) and Chief Management Accountants (CMA) represented managers'

commitment towards the environment. However, Gil, Jimenez, and Lorente (2001) noted that Corporate Environmental Management (CEM) needed to focus on technical and organisational activities because environmental management required interaction with these divisions. Managers who recognise the key values of environmental management practices were willing to act and change former their practices towards better environmental conduct (Hunt and Auster, 1990).

Thus, all managers must consider better environmental management during their activities. The better their mindsets and commitment towards environmental practices, the better will be the support and involvement of these managers towards better organisational environmental performance. In this study, the survey respondents were corporate managers, specifically financial and accounting managers and environmental managers, who significantly influenced the quality of their organisations' environmental activities and performance. This sample was selected because these managers were known to hold high roles in managing organisations' environmental practices. The work responsibilities of accounting and financial managers have now become more advanced, as, nowadays, they need to identify environmental issues and, at the same time, find ways that could lead to cost reductions that benefit both their businesses and the environment. Specifically, they need to ensure that environmental costs are properly allocated and managed to ensure that the services conducted meet the expected environmental improvement.

The questionnaires were sent to 1,050 financial and environmental managers from 525 organisations. The managers were from organisations operating in seven key environmentally sensitive sectors: construction, consumer products, industrial products, plantations, oil and gas, property, and infrastructure (Mokhtar and Sulaiman, 2012). The total number of responses received was 99, equivalent to a 9.5% (99/1050) response rate. Fifty-four questionnaires were received from the early distribution, while the remaining 45 were received after several reminders through; emails, follow-up phone calls, or personal meetings as requested. The independent sample t-test was conducted to compare the means between the early and late responses to determine whether the two groups were similar. Levene's test for the equality of variances was also used to indicate which values to use to analyse the equality of the means (Pallant, 2013). According to Van der Stede et al. (2005, pp. 673), '*even when the response rate is low, the results are still generalisable as long as there is no response bias*'. Hence, a test for non-response bias was conducted.

Table 1 Mean Scores of the Early Responses and Late Responses

	Variables			Levene's test for equality of variance	
	N	Mean	Std. Deviation	F	Sig.
Before reminder	54	4.074	0.72	1.6034	0.3250
After reminder	40	4.160	0.73		

### Description of measurement items

A 6-point scale, where 1 represented 'strongly disagree' and 6 represented 'strongly agree', was used to assess the extent to which the respondents agreed or disagreed with each measurement item. Each construct in the questionnaire was modelled to have more than five measurement items. An independent sample t-test was conducted to compare the means between the early and late responses to determine whether the two groups were similar. Levene's test for the equality of variances was also used to indicate which values to use to analyse the equality of the means (Pallant, 2013). The results showed that all the variables tested before and after the reminder reported insignificant F-values with a p-value > 0.05. This finding indicated that all the variables tested reported insignificant outcomes, clearly proving that neither the early nor late responses were significantly different.

This study used commitment toward environmental preservation to measure managers' environmental attitudes. The attitude items were revised from the measures developed by Gadenne et al. (2009) from Dunlap et al. (2000) and used by Scott and Willits (1994). The SN component dealt with external stakeholder pressure. It focused on managers' perceptions of external stakeholders' motivations and their approval or disapproval of following organisations' pro-environmental practices (Gadenne et al., 2009; Sarkis et al., 2010). PBC refers to the perceived ease or difficulty of performing a behaviour. The principal objectives of a business are to supply and deliver goods and services required by consumers to attain acceptable profits. Hence, economic responsibility is acknowledged to be the primary role and responsibility of organisations in fulfilling society's requirements and, at the same time, obtaining acceptable profit (Ismail et al., 2014). Finally, the religiosity variable was included to further improve this theory's predictive value. The religiosity

construct was measured in two areas: extrinsic values and intrinsic values. Intrinsic religiosity values represented the managers' inner principles that fulfilled their personal needs, while extrinsic religiosity denoted the managers' character that uses religiosity as a source to fulfil their personal needs (Allport and Ross, 1967; Vitell et al., 2007).

## DATA ANALYSIS

Correlation analysis tests the strength of a linear relationship and the association between two variables. It is used to measure the strength of the relationship between two variables and discover the degree to which they are connected. Pearson's correlation differs by a range of +1 to -1. The coefficient's sign indicates the direction of the relationship - whether a large value on one variable is associated with the values on other variables. Correlation analysis was conducted for the following variables: managers' attitudes, subjective norms, perceived behavioural control, religiosity, and managers' intentions. Table 2 shows that Pearson's correlation for all variables was relatively low, less than 0.6.

Table 2 Pearson's Correlation Matrix between the Independent and Dependent Variables

	Attitudes	Subjective norms	Perceived behavioural control	Religiosity	Managers' intentions
Attitude	1				
Subjective norms	.005	1			
PBC	.239*	-.041	1		
Religiosity	.113	.272**	.308**	1	
Managers' intention	.028	.485**	-.046	.318**	1

Notes: \*Correlation was significant at the 0.05 level (2-tailed). \*\*Correlation was significant at the 0.01 level (2-tailed)

The collinearity diagnostic represents the relationship between the independent variables (Pallant, 2013). It is normally required when two or more independent variables are highly correlated ( $r = 0.9$  and above) (Pallant, 2013). The Variance Inflation Factor (VIF) was calculated to test the impact of collinearity. Multicollinearity exists when the VIF exceeds 10 (Pallant, 2013). The results presented in Table 3 indicate that the largest VIF value was 1.443, which was less than 10, implying that no collinearity problems existed among the variables in this model and that the estimated multiple regression value was acceptable.

Table 3 Collinearity Diagnostic Results

Variable	VIF Value
Attitudes	1.255
Subjective norms	1.305
Perceived behavioural control	1.222
Religiosity	1.443

In this study, Partial Least Squares-Structural Equation Modelling (PLS-SEM) was used to analyse the hypotheses. A reliability test was conducted to determine the degree to which the results were similar, even if the study was conducted in a different environment (Cooper and Schindler, 2008). Three methods were used to analyse reliability: consistency, convergent, and discriminant validity. Almost all the variables showed CR values of more than 0.7, except for attitudes and PBC. In this study, for managers' attitudes, out of 21 items, nine items were deleted at this stage (approximately 43 per cent), including one item for perceived behavioural control (20 per cent). Removing items that did not meet the required standards is not unusual. Albers (2010) reported that some researchers had eliminated as many as 50 per cent of the items they had developed for a particular study due to low reliability. Hence, the number of items deleted was acceptable.

Discriminant validity is the extent to which a construct diverges from other constructs by empirical standards. To determine whether items loaded on other constructs are equal to their theorised construct, cross-loadings, Fornell-Larcker criterion, and Heterotrait-Monotrait ratio (HTMT) correlations were calculated.



Table 4 Fornell-Larcker Criterion

	1	2	3	4	5	6	7
Attitudes	0.459						
Environmental behaviour	0.176	0.893					
Financial behaviour	0.322	0.565	0.777				
Intentions	0.375	0.562	0.553	0.762			
PBC	0.121	0.132	0.151	-0.15	0.785		
Religiosity	0.409	0.139	0.043	0.408	0.292	0.653	
Subjective norms	0.305	0.342	0.305	0.525	0.191	0.33	0.656

Table 5 HTMT

	1	2	3	4	5	6	7
Attitudes							
Environmental behaviour	0.214						
Financial behaviour	0.273	0.596					
Intentions	0.301	0.57	0.573				
PBC	0.473	0.135	0.148	0.162			
Religiosity	0.505	0.188	0.205	0.4	0.342		
Subjective norms	0.34	0.32	0.323	0.518	0.241	0.435	

The results above supported the overall quality of the final measures of each variable and proved that they were reliable, internally consistent, and had convergent and discriminant validity. The measurement items were, therefore, acceptable for further analysis.

PLS-SEM was used to analyse the data. At the bootstrapping stage, a sample number of 5000 with a 5% significance (one-tailed) was chosen to test the bias-corrected and accelerated bootstrap. The relevance of a significant relationship, the R<sup>2</sup> (coefficient of multiple determinations) and f<sup>2</sup> (effect size) measurements were also determined. As shown in Table 6, the R<sup>2</sup> values were moderate. The effect size (f<sup>2</sup>) measures the impact of a specific exogenous construct on the endogenous construct. The f<sup>2</sup> effect size measures the change in R<sup>2</sup> value when a specific exogenous construct is omitted from the model. It is used to evaluate whether the omitted predictor construct has a substantive impact on the R<sup>2</sup> values of the endogenous construct.

Table 6 The Levels of R<sup>2</sup> and F<sup>2</sup>

	Level of f <sup>2</sup>			R-squared
	Intention	Environmental behaviour	Financial behaviour	
Attitudes	0.042			
Subjective norms	0.148			
PBC	0.047			
Religiosity	0.086			
Intentions				0.39
Environmental behaviour		0.461		0.316
Financial behaviour			0.441	0.306

To summarise, the results indicated that pro-environmental intentions and financially responsible behaviour fitted relatively well with the respective data. Hence, PLS-SEM analysis was conducted to confirm the outcome of the established hypotheses.

Table 7 PLS-SEM results

Model	Beta Coefficient	T-Statistics	P-Values	2.50%	97.50%
Attitude → Intentions	0.143	1.222	0.222		
SN → Intentions	0.075	4.669	0		
PBC → Intentions	0.116	1.56	0.119		
Religiosity → Intentions	0.098	2.989	0.003		
Attitude → Intentions → Financial Behaviour	0.318	1.058	0.29	0.419	0.558
SN → Intentions → Financial Behaviour	0.181	1.343	0.18	-0.441	0.417
PBC → Intentions → Financial Behaviour	0.122	1.308	0.191	0.382	0.025
Religiosity → Intentions → Financial Behaviour	0.18	0.33	0.741	0.279	0.333

## DISCUSSION OF THE FINDINGS

The findings of this study provided evidence that although managers favoured pro-environmental practices, this did not translate to financially responsible actions. Specifically, this study shows that the hypotheses focused on subjective norms and religiosity influenced managers' pro-environmental intentions to preserve the environment. However, the findings also revealed that pro-environmental intentions had no mediating effect

between 1) attitudes, 2) subjective norms, 3) PBC or 4) religiosity and managers' financially responsible behaviour. Although Beck and Ajzen (1991) noted that intentions controlled actions, not all intentions were carried out. Intentions can only predict a person's behaviour if the behaviour can be freely carried out by the individual (Armitage and Conner, 2001). Therefore, although intention is a good predictor of behaviour, there is always a gap between intention and behaviour (Hooft et al., 2005). In this study, managers' financially responsible behaviour connoted their willingness to spend on environmental preservation activities. The results showed that even when there were high intentions to perform such behaviour, intentions alone were insufficient. Managers' personal beliefs concerning their inability to meet their organisation's expectations could hinder their intentions to perform the expected financially responsible behaviour to protect the environment.

This study provided some empirical evidence that although managers were keen to engage in pro-environmental practices, due to the strong impact of such activities on their financial performance, they tended to focus more on profitability. They were reluctant to accept a reduction in their organisations' financial gains in favour of pro-environmental activities. Specifically, it indicated that managers only intended to engage in financially responsible behaviour if it were not too costly nor too arduous to implement.

One of the possible reasons that financially responsible behaviour in preserving the environment was not feasible was that organisations hold their managers accountable for the organisations' environmental and financial performance (Hemingway and Maclagan, 2004). The aspiration of organisations to gain high profits could restrain managers from performing financially responsible behaviour (Faulkner et al., 2005). Managers are typically expected to reduce costs when pro-environmental practices are conducted. If improved financial benefits do not compensate for the costs invested in pro-environmental practices, managers will perform fewer pro-environmental activities. This finding justified that managers were more concerned with maximising their organisational profits rather than engaging in pro-environmental practices (Agyabeng-Mensah et al., 2020).

Contrary to this study's prediction, managers' attitudes were found to have no link with intentions or financially responsible behaviour. One plausible explanation for this situation is that managers' attitudes might be entangled with other important objectives. As posited by the TPB, attitudes can mix with either SN or PBC, affecting intentions and behaviour (Ajzen, 1991). The managers, when interviewed regarding these issues, also supported this explanation. Most managers highlighted how important achieving their organisations' expected profit was. Therefore, it was hard for them to adopt pro-environmental attitudes when high costs were involved in such activities. The following comment supported these views:

'The highest obstacles are our financial ability as a manager in my organisation. Costs are the driving factor. Lots of costs would be involved to save the environment.' (Manager F)

The interview excerpt supported why managers hardly engage in financially responsible behaviour. A manager who has experienced high pressure to gain better profits may be discouraged from exhibiting attitudes to adopt better intentions and behaviour to protect the environment.

Subjective norms could also improve efficiency in protecting the environment, which may provide cost savings (Zhang et al., 2015). Managers with serious concerns about complying with SN requirements will acknowledge the importance of performing pro-environmental practices. For example, managers who strictly follow environmental regulations will push their organisations to reduce any possible negative environmental impacts. In doing so, they would achieve both cost savings and environmental benefits in the long run. However, the findings revealed that subjective norms did not influence managers' pro-environmental intentions or financially responsible behaviour. Managers believed that actions and decisions that led to the required profit were more important than conforming to subjective norms and expectations. This situation probably was because there are limited ethical guidelines concerning how managers should react when confronted with conflicting objectives, thus, further underscoring managers' dilemmas in fulfilling subjective norms and demands (Dusuki and Abdullah, 2007). Hence, the managers remarked on their need for government support to adopt financially responsible behaviour in their organisations, as explained by the following manager:

'The government should provide subsidies from the start. This situation is because to boost demand until the demand is good, the government can take back the subsidies, which means the price will be lower due to high purchases. Hence the government still plays a major role in promoting this issue.' (Manager I)

This situation implies the importance of governmental financial support in motivating managers to engage in financially responsible behaviour. The government should know that funding is an important issue faced by managers. Therefore, the ministry, specifically Minister of Natural Resources, Environment and Climate Change must make resources and funds available for organisations to foster environmental preservation practices. Governments that are fully attentive to environmental and financial issues could assist in realising an optimal approach to protecting the environment.

This study also noted that although managers were willing to perform pro-environmental practices, they seemed to have little knowledge about the financial benefits that could be obtained from their suppliers and customers if they were to adopt such financially responsible behaviour. One possible reason is they believed that it was only reasonable to conduct pro-environmental practices when it was financially sensible. The managers believed that SN did not pressure them on the importance of preserving the environment. Hence, they did not feel the obligation to display financially responsible behaviours. This finding highlighted the importance for managers to realise the financial benefits of protecting the environment. Suppose managers believed that they could obtain cost benefits by fulfilling the environmental needs of their suppliers and customers. In that case, they would put in more effort to learn how to earn such benefits (Gadenne et al., 2009). They would be encouraged to acquire financial benefits via pro-environmental activities. Such activities might include recycling goods packaging, changing business processes to reduce waste or unneeded raw materials, or finding ways to conduct practices that may be high in costs at the beginning but will eventually lead to cost reduction in the future.

While the first two factors did not bring significant findings, a negative relationship was found between managers' PBC and their pro-environmental intentions to adopt financially responsible behaviour. The results implied that managers would only support preserving the environment if they saw economic benefits. It can be observed that managers were more concerned about economic gains rather than environmental protection. Several managers that were interviewed even highlighted that when they encountered cost encumbrances, it would be difficult for them to adopt pro-environmental practices:

'Last year, our organisation planned to build a new office, and, at the same time, we wanted to adopt green technologies for the new office. For example, less lighting and more glass, but then, we found out that it was not practical because of the costs it would incur. The initial cost is our first burden. In addition, we are in a different business, so green tech is just a side project, not our main goal. So, when we saw the exorbitant costs, we knew it would affect our financial cash flow and ultimately our profit.' (Manager B)

'There are certain practices that we conduct that might reduce our financial costs; however, there are also certain activities that might not be applicable due to the high costs required to perform the activities.' (Manager F)

The uncertainty in organisations' economic conditions has put pressure on managers to focus highly on their organisations' financial performance. Therefore, only when managers can achieve better economic performance would they think more about long-term benefits and initiate strategies in which implementing pro-environmental practices becomes essential. Nevertheless, managers must understand that managing the environment does not only primarily affect organisations' cost-savings and profit margins but could also lead to better reputational benefits. This situation, ultimately, would direct their organisations towards better profit maximisation (Schaltegger and Synnestvedt, 2002). Specifically, Henri and Journeault (2010) asserted that pro-environmental practices drive organisations to achieve cost reductions via ecological efficiencies, expansions to meet green market demand, and a better image. These advantages broaden an organisations' influence on customers, suppliers, and shareholders' interests. Hence, there is a need for organisations to hire managers with pro-environmental behaviour; managers who simultaneously aim to earn acceptable profits for their business and acknowledge their responsibility to preserve the environment for the benefit of their country and the world.

This study also found that managers' pro-environmental intentions did not mediate the relationship between religiosity and financially responsible behaviour. Specifically, this study observed that if performing pro-environmental practices required high financial obligations, it would be difficult for their religious obligations to sway this behaviour. This result implied that managers still focused on their organisation's financial performance, although their religiosity supported the importance of preserving the environment. This finding may create a negative impression concerning the influence of religiosity since managers were found to have high religious values. Unfortunately, this study failed to demonstrate the significance of religiosity

values on pro-environmental behaviour and that it was not necessarily incompatible with the perception of the underlying theory. This outcome was further supported by Manager F when he revealed the following:

‘OK, these issues, if viewed from an Islamic point of view, will require contemporary *‘fatwa’* (Islamic ruling), which is pushed by the authority. Personally, our living condition is geared more towards survival. This environmental issue would only be considered once you have settled your basic needs. Then only would you go for environmental activities. But if your survival is still not properly settled, how can you think about the environment when you can’t see the advantages? But as a Muslim, it is good behaviour. As Muslims, we are responsible for preserving the environment. However, like I just said, although you are highly motivated by your own beliefs, not many have strong religious beliefs that would push them to behave following their religious values.’ (Manager F)

Although the finding on religious values was contrary to the findings of this study, the finding was useful, as it provided some insights into the importance of enhancing religiosity to further develop managers’ financially responsible behaviour. The findings acknowledged that managers with high religious values would be more thoughtful about preserving the environment, although considerable expenses were needed. Specifically, this study showed a conflict between managers’ pro-environmental intentions and their aim to behave financially responsibly. Hence, there is a need for religiosity intervention for managers to believe that earning profit is not the ultimate objective of their focus. They need to believe that what is done today will benefit (or be detrimental to) the future. This outcome is because religious beliefs could further activate their financially responsible behaviour to engage in pro-environmental practices. This situation raises the importance for organisations to hire managers with high religious values, as they have ‘afterlife’ motivations to perform pro-environmental practices, eventually leading to financially responsible behaviour. It is acknowledged that such behaviour could be difficult for managers to initiate since their aim is more focused on the profitability of their companies. However, when these religious values are constantly upheld, they will eventually become a habit and easier to perform. Hence, there is a need to further foster; religious, ethical, and moral values concerning the importance of environmental protection.

## CONCLUSION AND RECOMMENDATION

In summary, the TPB was useful for identifying the antecedents and outcomes of managers’ pro-environmental intentions and financially responsible behaviour. The key objective to identifying these antecedents is to plan interventions more effectively to increase managers’ intentions to engage in pro-environmental practices. The results of this study suggested that environmental practices would be more effectively and efficiently conducted when managers could identify and acknowledge the benefits of engaging in such practices. Changing their beliefs and concerns about the possible advantages that could be obtained can improve their intentions, leading to increased financially responsible behaviour.

Although this study predicted that managers were highly committed to preserving the environment and were willing to invest financially for such a cause, the findings revealed the opposite. The managers showed concern for preserving the environment but were unwilling to invest in related environmental practices. The findings revealed that managers tended to believe that adopting pro-environmental practices could incur additional costs for their organisation, which may lead to less profit. Although there were opportunities that could be gained by performing environmental practices, they were still reluctant to explore these benefits. Hence, it is vital to bring the right goals to managers’ attention.

Managers need to acknowledge that the benefits of environmental preservation are hard to see in the short term, but in the long term, there are significant benefits that could be ascertained by their organisations (Hang et al., 2018). Responsible managers would then uphold the highest standards in connecting economic advancement and environmental sustainability. Managers need to place greater emphasis on environmental preservation best practices. Such actions will lead them to adopt long-term actions to preserve the environment. From an extensive strategic perspective, managers should acknowledge that adhering to better environmental practices could sometimes encourage their organisations to achieve better financial performance. This situation is because a future environmental impact is difficult to assess. Organisational activities are known to affect the environment; hence, if managers are continuously motivated to care for the environment, unrecognised potential problems could be appropriately addressed.

This study was subject to the usual limitations associated with survey research. Therefore, further research is needed to confirm the findings of this study. First, other factors could influence managers' financially responsible behaviour, such as culture and job responsibilities in achieving organisational goals. Therefore, researchers could further analyse other factors influencing managers' behaviour and simultaneously guide organisations in selecting the right managers for their respective positions and responsibilities. Second, this study only focused on Malaysia. Thus, different results could be obtained if the study can be replicated in other countries. A follow-up study in this area could improve the generalisation of the findings, which may be more fruitful for future research.

Another important and interesting area for future research would be to conduct in-depth interviews to analyse other factors that could influence managers' financially responsible behaviour. These interviews could be conducted with managers and employees to understand their motivations and constraints in being sustainable and financially responsible. Such in-depth discussions could provide a further understanding of the factors that motivate or discourage managers from performing an expected behaviour.

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