Entrepreneur's Pro-Environmental Behavior: The Mediating Role of Corporate Social Responsibility

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The purpose of this research was to investigate corporate social responsibility CSR as a mediating factor affecting the separate relationships between pro-environmental behavior (PEB) and both environmental education (EE) and environmental concern (EC). The framework in this study was based on the theory of planned behavior which presents the relationship between attitude, norms and intention. The list of small and medium enterprises (SMEs) for this research was randomly selected from the database of the Department of Business Development, Ministry of Commerce, Thailand. A self-administered questionnaire was developed to collect the data from owners and managers of SMEs. The two-sampling research method was a combination of mailed self-administered questionnaires and purposive sampling methods. A total of 774 surveys from 401 enterprises were used in this study. The result for mediation effect of corporate social responsibility was significant, indicating that corporate social responsibility mediated the relationship between environmental concern and pro-environmental behavior (β = .52, p < 0.01). Additionally, environmental education (β = .18, p < 0.01) and environmental concern (β = .72, p < 0.01) impacts corporate social responsibility and is statistically significant to pro-environmental behavior (β = .37, p < 0.01). SMEs should focus on the environmental concern within their organizational communications, and provide environmental education, as they are key dimensions in driving the pro-environmental behavior of the SMEs. The practical implication of this study is that in order to enhance PEB among Thai SMEs, there is a need to ensure adequate amount of CSR activities in Thai SMEs.

Keywords: theory of planned behavior, pro-environmental behavior

The Small and Medium Enterprises (SMEs) are known as the backbone of the economy because they are an important contributor to employment and economic growth (Yacob, Wong, & Khor, 2019). Environmental problems are still a major concern to the Thai public and government (Ministry of the Environment Government of Japan, 1998). According to Sony and Ferguson (2017) close attention should be paid to environment interests, ethical standards and behavioral characteristics. Indeed, SMEs have problems relating to the environmental impacts of their activities and their businesses (NetRegs, 2009).

Large firms focus on environmental performance while only a few SMEs implement environmental activities within the organization. Even though SMEs are crucially important to the economic growth of an economy SMEs still have many environmental challenges compared to larger firms. These challenges will have to be overcome to sustain their competitiveness. (Ghadge, Kaklamanou, Choudhary, & Bourlakis, 2017). Additionally, public's interest in environmental concern (EC), environmental education (EE), corporate social responsibility (CSR) has rapidly increased. Organizations have been realizing the importance of environment practices. They are essential for SMEs to understand the definition and the activities of

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environmental practices to improve their organizational performance. In this study, the researchers apply the theory of planned behavior (TPB) (Ajzen, 1991) to the aspects of environmental attitude and pro-environmental behavior. Based on TPB, our research paper has attempted to study the gap between environmental attitudes and pro-environmental behavior. The study also demonstrates the influence of environmental attributes such as EE/EC on PEB, among Thai SMEs. Finally, the study reconfirms the constructs of EE, EC, CSR and PEB through a Confirmatory Factor Analysis (CFA).

Based on the gap in PEB and its related variables, this paper advances the following objectives: (i) to investigate the relationship among EE, EC, CSR, and PEB, and (ii) to identify the moderating effect of corporate social responsibility to the relationship between EE and EC, toward PEB. The major research question in this paper is whether EE and EC are the primary drivers of CSR. Moreover, the research question also investigates whether CSR is influential to PEB. The study also investigates the mediating role of CSR, and whether or not it can enhance the relationship between EE and EC, toward PEB. The findings in this study contribute important determinants of PEB of Thai entrepreneur. Additionally, the research also contributes not only investigating the TPB in new context but also presenting significant predictors of PEB of entrepreneurs in Thai SMEs. The following section presents the research method, examines the results and provides discussion. The last section demonstrates the managerial implications, conclusions and limitations of further study.

Literature Review and Research Hypotheses

Theory of Planned Behavior

The original model of the TPB by Ajzen (1985) demonstrated TPB as trying to behave in a given way prior to the actual behavior. It is an extension of the theory of reason (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). The theory of reasoned action forecasts and recognizes motivational influences on human behavior. In order to achieve the desired behavior, a person needs opportunities and resources; therefore, Ajzen (1985) has proposed an extension by adding perceptions of behavior control to predict intentions and actual behavior. Ajzen (1985) discussed the aggregation principle which has demonstrated that general attitudes and personality traits do predict behavior; though, they don't predict a specific behavior in all situations. The TPB by Ajzen is the basis for continued study of human behavior. The study by Ajzen (1991) demonstrates that attitudes, subjective norms and behavioral controls influence behavioral intentions. He also suggests that personal intentions are the predictor to actual behavior. Therefore, the framework in this study establishes the link between attitude toward environmental issues and behavior intention of managers and SME's owner in Thailand. Accordingly, the study focuses on three important components of TPB to predict the behavior of Thai entrepreneurs which are attitude, norms and intention.

The previous work of TPB by Schifter and Ajzen (1985) presented the significant relationship between the intention of behavior and actual behavior. Ajzen and Fishbein (1980) explain that it is necessary to know the intention of different performances because the intention of human behavior is the antecedent of that behavior. Human intention is derived from motivation and the objective to behave in a certain manner (Ajzen, 1991). Additionally, a higher level of behavioral intention results in a higher level of actual behavior.

Ajzen's theory demonstrates three predictors of behavioral intentions in people. The first component of TPB is attitude. Attitude is defined as the evaluation of a specific behavior (Ajzen, 1991; Han & Kim, 2010). The attitude of human behavior is linked to the level of favorable and unfavorable judgment of an individual person. A more favorable attitude level of an individual leads to a higher intention which results in the higher performance of actual behavior (Ajzen, 1991; Davis, Ajzen, Saunders, & Williams, 2002). Generally, positive attitudes relate to environmental factors (Watkins, 1994). For example, the green-positive attitude of the traveler is significantly influenced by the level of green-performance in the hotel business (Manaktola & Jauhari, 2007). People intend to return to accommodation that implements environmental practices because of the positive experiences (Manaktola & Jauhari, 2007). The determinant of EE and EC are the evaluation of attitude in this study.

The second antecedent in predictors of intention in the model is the perceived subjective norm. Subjective norms in TPB can be explained as the perception of social pressure to behave in a certain manner. The subjective norm is defined as the perception social pressure to implement or to not implement behavior (Han & Kim, 2010; Tonglet, Phillips, & Read, 2004; Ajzen, 1991). The subjective norm influences the behavioral intentions and attitudes of the individual (Han & Kim, 2010). Subjective norms are influenced by other persons such as family or friends. In relation to this study, the investigation of norms in this study is the determinant of corporate social responsibility. The perception of CSR is the determinant of the social perception relating to social issues. Additionally, CSR in Thailand shows a relationship between social and environmental issues (Chapple & Moon, 2005). In order to better understand CSR, Dashwood (2012) suggests that the results of CSR are the combination of appreciation for learning and normal social practice.

There has been previous research which investigated whether there was a relationship between the TPB, the three predictors (i.e. attitude, subjective norm, and perceived behavior control) and the PEB of Dutch citizens (Harland, Staats, & Wilke, 1999). The results indicated that the PEB of Dutch citizens is affected by the three predictors of TPB.

Predicting Pro-Environmental Behavior (PEB): Environmental Education (EE), Environmental Concern (EC) and Corporate Social Responsibility (CSR)

Environmental education consists of: knowledge of environmental background, experience, perception, value, and context (Leal, 2000). The aim of EE is linked to desirable outcomes of the learners United Nations Educational, Scientific and Cultural Organization (UNESCO, 1975). Education is important for the public to help the sustainability of the environment (United Nation, 1992). The purpose and the context of the education for sustainability is included in EE (Papadimitriou, 1998). Additionally, United Nations Educational, Scientific and Cultural Organization (UNESCO, 1975) defined that the learner should have: (i) an awareness and understanding of the environment issues; (ii) the knowledge related to the environmental issues, the problems and solutions; (iii) the attitude about concern for environmental (i.e. the concern for wildlife or the concern for energy); (iv) skills for problem solving related to the environmental issues; (v) the evaluation ability about environmental issues; and (vi) taking action to solve environmental problem. Horkheimer and Adorno (2002) also point to EE as an enabling mechanism to teaching individuals about monitoring corporate activity and encouraging socially responsible behavior. Moreover, the study of George, Ruby, Robert and Evans (2013) shows the relationship between the EE and CSR, in the organization. Their study links customer awareness, CSR and education campaigns. Results of these studies

are frequently shared with the public as social responsibility becomes an increasing popular topic (Horkheimer & Adorno, 2002; Kletz, 2009) thus, this study hypothesized:

H1: Environment education will be positively related to corporate social responsibility.

Stafford, Stafford, & Collier's construct consists of concern for wildlife, concern for waste, and concern for energy (2006). Stafford et al. (2006) evaluate three dimensions of EC in order to investigate consumers' attitudes. The study of Cleveland, Kalamas and Laroche (2005) demonstrated that EC affects the behavior of consumers. EC started being considered "as the inclination to taking action with pro-environmental intentions" (Stern, 2000). In any case, the definition of EC refers to a common approach to the environment, or sets of way more or less specific to humans to fulfill different tasks or the responsibility humans have in tackling environmental issues (Grob, 1995) . These include environmental attitudes as a factor influencing environmental behavior. However, the drivers for CRS can differ across countries, as pointed out by Golob and Jennifer (2007) . In their study that they presented in Australia, CSR initiatives were often triggered by management in an effort to better the company's financial situation, while in Slovenia it was called for by employees and communities with EC. Factors affecting EC can have a possible impact on the sustainable development of the organization. Hence, the following hypothesis was proposed:

H2: Environment concern will be positively related to corporate social responsibility.

Corporate social responsibility commonly refers to a self-regulatory mechanism to ensure the firms' activities do not conflict or harm society (Horkheimer & Adorno, 2002). In a study by Roach and Slater (2016), for example, a clear correlation between CEOs studying the humanities and the degree to which they applied CSR principles could be observed. Moreover, PEB presents as actions that damage nature as little as possible or behavior which utilizes the environment positively (Steg & Vlek, 2009). According to the study of Inoue and Kent (2012) reports that the positive environment practices affect PEB. Their study evaluates the relationship between the support team's environmental goals and their PEB.

The study of Andorfer and Liebe (2012) presents a theory related to attitude and intentions. The study however, did not include the actual behavior. Webster (1975) developed a study between environmentally conscious attitudes and socially conscious behavior but that study did not examine intentions (Kaiser, Wölfing, & Fuhrer, 1999). Some studies investigate the impact of economic issues of EC, and the variety of concern predicted, to actual behavior (Cleveland et al., 2005). The study of Engle et al. (2010) used Ajzen's theory of planned behavior to predict the intent of actual behavior of entrepreneurs. The model of planned behavior demonstrates a high level of accuracy in predicting different types of behavior (Engle et al., 2010). The attitudes, norms, and perceived behavioral controls can be accurate predictors of behavioral intentions to actual behavior (Ajzen, 1991). This study adopts the TPB to determine which attitudes and norms affect entrepreneurs' intentions relating to environmental issues

The aim of this paper is to investigate the entrepreneurs' PEB intentions by investigating determinants in TPB by Ajzen (1991). The intended contribution of this research is to demonstrate an understanding of the attitudes and norms influencing pro-environmental intentions of entrepreneurs. This research examines the correlation between attitude and intentional behavior using Ajzen's (1991) planned theory as the method of investigation. The

focus of this study is to identify the determinants in entrepreneurs' intentions (PEB). We do not investigate the full TPB model. The model includes attitudes (conceptualized as EE and EC), norms (conceptualized as perception of corporate social responsibility) and intentions (conceptualized as pro-environmental behavior). Actual behavior according to TPB is not included in this study. Based on entrepreneur's context, the literature shows a lack of linkage in the studies of the relationship among EE, EC, CSR, and PEB; especially in SMEs. This study proposes a hypothesis that examines the relationships between EE, EC, CSR, and PEB. The hypothesis also adopts CSR as a moderating variable and determines its impact on environmental behavior, and the impact on the relationship of EE and EC, toward PEB. Due to the aforementioned evidence, the following hypotheses and sub-hypotheses were proposed:

H3: Corporate social responsibility will be positively related to pro-environmental behavior.

H4a: Corporate social responsibility will mediate the relationship between environmental education and pro-environmental behavior.

H4b: Corporate social responsibility will mediate the relationship between Environment concern and pro-environmental behavior.

Method

Sample and Data Collection Procedure

To collect the data, a questionnaire was developed to survey the owners and managers in SMEs in Thailand. SME's are enterprises that employ no more than 200 full time employees, not exceeding 200 workers, or with assets not exceeding 200 million Baht (Office of Small and Medium Enterprises Promotion [OSMEP], 2016). A combination of mailed self-administered questionnaires and purposive sampling methods were conducted in this study. We commenced the sampling process by simply randomly selecting SMEs from a list of the Development of the Ministry of Commerce of Thailand. The list of the SMEs was obtained from the website of the Department of Business Development of the Ministry of Commerce (DBD), a government department for the development of SMEs in Thailand. The questionnaires were mailed to two respondents at each company. Each company was surveyed by the SME owner and a manager. Additionally, the purposive sampling method was used to collect samples from Thai SMEs. Several visits were made to different industries of Thai SMEs from the central region to collect the data from owners and managers of selected companies based on the researcher's judgment method. Those who agreed to participate requested that their company names were not disclosed. A total of 845 questionnaires were collected. From this initial number, 774 from 401 enterprises were used as the sample for this study. A total of 71 questionnaires were eliminated as unusable because of missing data and they were determined to be invalid.

To analyze whether the second order CFA model for the factorial validity of EE, EC, CSR and PEB are feasible, the data in this study was collected by using a self-administered questionnaire survey. Based on the literature, data screening and detecting univariate outliers were performed (Carter, Neil, & Terry, 2009) and non-valid questionnaires were deleted from this analysis, resulting in a total of 774 valid questionnaires used to analyze the data. The original instrument was prepared employing the English language. Furthermore, a pretest was conducted to evaluate the suitability of the wording and the extent to which measures represented all the facets of the constructs. Based on the pretest responses, necessary changes were later incorporated into the final questionnaire.

Measures

The measurement scale developed for this study is an interval scale which excludes a demographic of the respondents. The questionnaire was developed in English language and then translated to Thai. The questionnaires were translated into Thai by academic and industry experts in both languages. Then, the Thai language questionnaires were used to collect the data from Thai SMEs because Thai is the language that the participants were most familiar with. The translated Thai version was later translated back into the English language for the purposes of this study. The scales were developed as explained.

Environment education. To develop the measurement of EE, three factors were assessed: skill, participation, and evaluation. Within the instrument, measures of a 5 item scale of EE skills were adopted from the Australia Department of Education and Training, which published a guide for core skills (Commonwealth of Australia, 2009). The Australian Department of Education and Training adapted the measures as pertaining to environment issues. Participation factors in this study have explained the involvement in evaluating the area of a project, decision making, providing information, and assessing important impacts (Constantina & Evelina, 2002; Vanclay & Bronstein, 1996). For a 4 item scales of participation items of EE measurement, SME owners and managers were asked how much they agree or disagree with the following statement samples: "I openly support environmental protection by delivering speeches and writing articles", and "I participate in activities organized by environmental organizations or groups". Environmental evaluations were assessed with 4 items which modified the evaluation from Johnson (2015). Guba and Lincoln (1981) described the role of evaluators as collectors and the analysts of data basically implementing the task of the instrument. In this study, the respondents were asked environment evaluation questions related to the collecting and analyzing of the environmental data. Sample items are: "I can develop the evaluation scope and questions for environmental".

Environmental concern. As for EC, the EC questions of Stafford et al. (2006) consist of three dimensions: concern for wildlife, concern for waste, and concern for energy. A total of 15 items were used to measure the environmental concern. The respondents in this study were asked to rate each of the statements on a five -point Likert scale (1= "strongly disagree" to 5= "strongly agree").

Corporate social responsibility. The measure of CSR items was adopted from Tan and Komaran (2006). The CSR questions consist of: economic responsibility, legal responsibility, ethical responsibility, philanthropic responsibility, charity principle, stewardship principles, and environmental friendliness (Tan & Komaran, 2006). The total of 26 items in the instrument is developed by using a Likert five-point scale to investigate the perception of CSR. The respondents who selected ''strongly disagree'' on these questions had a positive perception about the statement.

Pro-environmental behavior. With respect to PEB questions, the respondents were asked to rate pro-environmental issues by using the New Environmental Paradigm (NEP) by Dunlap and Van Liere, published in 1978. The 9 items from 3 factors of the NEP scale consists of eco-crisis, balance of nature and limit of growth. The balance of nature and limit of the growth scale developed by Dunlap and Liere (1978) were used as a construction in this study. Additionally, the pro-environmental questions related to eco-crises by Dunlap, Liere, Mertig and Jones (2000) were modified very slightly in the instrument.

Results

Initially, the convergent and discriminant validity of the measures were assessed via a series of principal components analysis with rotation varimax in factor analysis. Items that reported lower significant loadings on their intended factor as well as high cross-loadings on other factors were dropped off. The reliability of the 16 constructs measured with the Cronbach α showed the acceptable value (> 0.70) in the range of 0.70 to 0.90 (Nunnally, 1978). Next, the remaining items were subjected second-order confirmatory factor analysis to assess each construct. Table 1 showed the loading of each second-order analysis and Cronbach's Alpha for each construct.

The results demonstrated that the measurement model consisting of EE, EC, CSR, and PEB fit the data well. The results of confirmatory factor analysis demonstrated the following fit statistics by revealing $\chi^2 = 5781.91$, $df = 1855$, CFI = 0.86, NFI = 0.80, RMSEA = 0.05 and it was a better fit than the single factor model by revealing $\chi^2 = 7074.23$, $df = 1861$, CFI = 0.81, NFI = 0.75, RMSEA = 0.06. The change in chi-square was significant with $\Delta\chi^2 = 1292.32$, $df = 6$, $p < 0.00$ indicating a validity for four-factor model. The composite reliabilities (CR) are well above the minimum threshold of 0.7 and convergent validity was verified by checking the average variance extracted (AVE) of each construct if exceeding the threshold (>0.5) and lower than CR; whereas discriminant validity was checked if average variance extracted (AVE) is greater than maximum shared variance or average (Fornell & Larcker, 1981).

Hypotheses testing

Structural equation with maximum likelihood estimation approach was adopted to test the study's hypotheses. H4a and H4b were first tested and suggested that corporate social responsibility mediated both relationships between environmental education toward PEB and environmental concerns toward PEB. Referring to the significant correlation in table 2, PEB was related to EE (r = .21) and EC (r = .79), ensuring that the direct, unmediated relationships were significant. It is also found that EC and EE are significantly related to CSR (r = .30, r = .75), establishing a relationship with a mediator. Finally, PEB was significantly related to CSR (r = .76), thus supporting a relationship between the mediator and the outcome variable, PEB. The outcomes also indicated that the mediation test for corporate social responsibility was supported. Next, the direct effects have been added into the model to estimate if adding the direct effect would substantially change the model fit. In doing so, the results help assess the mediation effect to see if CSR is completely mediate or partially mediate to the relationships in the proposed model. In table 3, the study compared the proposed model with a revised model that included direct effects into the model. The revised model with the direct relationships had a significant decrease in chi-square ($\Delta\chi^2/df = 79.08/2$ p = .00) which indicate the improvement in model fit and a significant path estimate for the EC → PEB relationship (β.52, p-value <0.01) but not for EE → PEB. The insignificant in path estimate between EE and PEB after CSR is included as a mediating construct in the model suggested a full mediation for CSR. However, the path estimate between EE and PEB is still significant while CSR, the mediator, also has a significant relationship with PEB. This means that there is a significant direct relationship between EC → PEB, but that there is also a significant indirect effect through CSR.

As recommended by MacKinnon and colleagues, the study implemented a bias-corrected bootstrap analysis to calculate the confidence intervals for the direct effects and the mediated effects (MacKinnon, Lockwook, Hoffman, & West, 2002). Based on the revised

model, 774 bootstrap samples were generated and estimated the bias-corrected confidence intervals and the mediated effect. Through the 95% confidence interval (CI), the size of the standardized indirect effect of EE→CSR→ PEB was 0.05 and was found to be statistically significant, 95% CI = 0.04 – 0.08, p = 0.01.

Table 1

The second-order of confirmatory factor analysis

Confirmatory factor analysis-second-order

Construct	Loading	Cronbach's α
Environmental education(EE)		
1. Skills	.78	.82
2. Participation	.85	.85
3. Evaluation	.95	.86
Corporate social responsibility(CSR)		
4. Economic responsibility	.73	.80
5. Legal responsibility	.79	.74
6. Ethical responsibility	.75	.75
7. Philanthropic responsibility	.86	.80
8. Charity principle	.69	.80
9. Stewardship principle	.79	.77
10. Environmental friendliness	.77	.86
Environmental concern(EC)		
11. Concern for wildlife	.83	.90
12. Concern for waste	.93	.87
13. Concern for energy	.91	.86
Pro-environmental behavior (PEB)		
14. Eco-crisis	.90	.71
15. Balance of nature	.88	.70
16. Limits to growth	.81	.72

Convergent and discriminant validity are achieved. The results of validity analysis are shown in the table 2.

Table 2

Correlations and validity for study variables

N = 774	CR	AVE	MSV	(1)	(2)	(3)	(4)
(1) PEB	.90	.75	.63	.87			
(2) EC	.92	.79	.63	.79	.89		
(3) CSR	.91	.59	.58	.76	.75	.77	
(4) EE	.90	.74	.09	.21	.16	.30	.86

Note: CR = Composite reliability; AVE = Average variance extracted; MSV = Maximum shared variance. Squared average variance extracted appear on the diagonal.

Table 3

Test of the Structural Model

Model element	Proposed model	Revised model with direct Effect	
Model fit			
x^2	5860.99	5781.91	
df	1857	1855	
P-value	.00	.00	
RMSEA	.05	.05	
Compare fit index (CFI)	.85	.87	
Goodness of fit index (GFI)	.80	.80	
Normed of fit index (NFI)	.84	.85	
Trucker-Lewis index (TLI)	.80	.80	
$\Delta\chi^2/df = 79.08/2$ p-value $<.05$			
EE$\rightarrow$ CSR	.17***	.18**	H1 supported
EC$\rightarrow$ CSR	.77**	.72**	H2 supported
CSR $\rightarrow$PEB	.81**	.37**	H3 supported
EE$\rightarrow$ PEB	Not estimated	.02	
EC$\rightarrow$ PEB	Not estimated	.52***	
R^2 CSR = .60 PEB = .69			

Note: N = 774. x^2= chi-square; df = degree of freedom; RMSEA = root mean square error of approximation; PEB = Pro environmental behavior; EE= Environmental education; EC = Environmental concern; CSR = Corporate social responsibility.
** Denotes significance level of 0.05; *** denotes significance level of 0.01

Proposed model:	EE and EC are linked to CSR; and CSR is linked to PEB. (EE and EC $\rightarrow$ CSR $\rightarrow$ PEB)
Revised model:	EE and EC are linked to CSR; CSR is linked to PEB; in addition, two direct paths are added from EE to PEB and EC to PEB. (EE and EC $\rightarrow$ CSR $\rightarrow$ PEB; EE $\rightarrow$ PEB and EC $\rightarrow$ PEB)

The mediate effect of CSR toward the relationship between EC and PEB was also found to be statistically significant with the size of 0.24 in the range of 95% CI = 0.16– 0.36, $p = 0.00$. Thus, both statistically significant findings supported the prediction that EE and EC led to higher PEB through the mechanism of increasing the level of CSR; therefore, H4a and H4b are supported.

In testing H1 to H3, the significant relationship reported in table 3 had supported the hypotheses. The study found a positive relationship between EE and CSR as well as a positive relationship between EC and CSR. Specifically, the coefficient of the path from EE to CSR was significant (β.18, p < 0.01) and the relationship between EC and CSR found statistical significant (β.72, p < 0.01). Meanwhile, the coefficient of the path from CSR to PEB was also reported statistically significant and positive coefficient (β.37, p < 0.01). As a result, the

statistical significant coefficient supported H1 – H3. Figure 1 summarizes the path results of the revised structural model as well. Therefore, H1, H2, H3, H4a and H4b are supported.
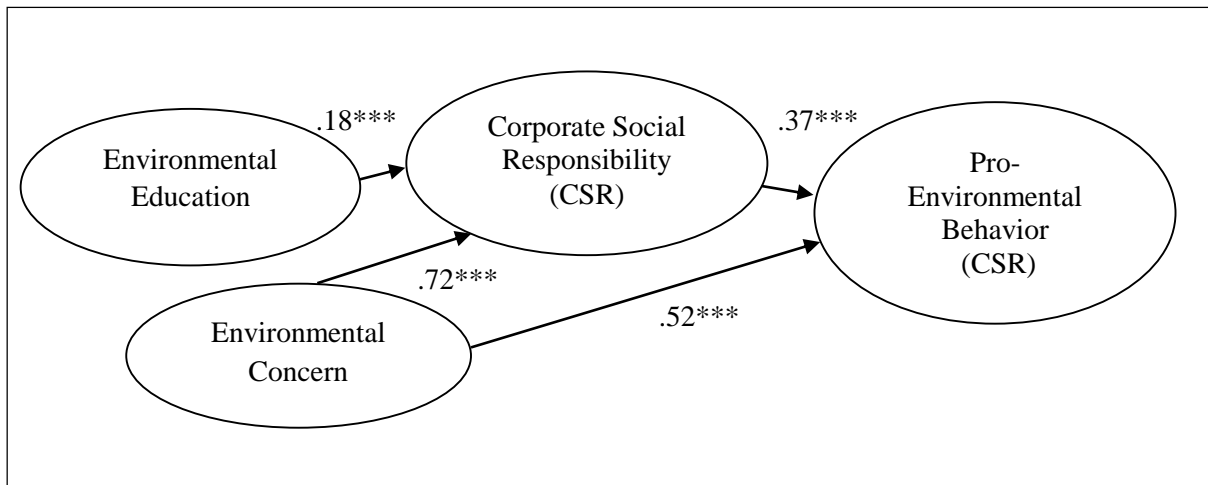

Figure 1. Path results for the revised structural model

The purpose of this study is to investigate how the TPB could assist in predicting the pro-environmental behavioral intention of entrepreneurs. The results from structural model presents a good fit. Figure 1 indicates that attitude toward EE and EC and norms toward CSR were the important determinants of behavioral intention (PEB). Figure 1 also noted that attitude toward EC is most important determinant of CSR perception. Further, Figure 1 also suggested that norms (CSR) mediate the relationship between attitude (EE and EC) and behavior intention (PEB).

In summary, it appears that if management wishes to enhance PEB among individuals, it needs to ensure that there is adequate or increased CSR activities organized for the employees who reported high in EC and have a strong foundation of EE. Specifically, individuals who are environmentally concerned and well educated in environmental issues will be more pro-environmentally active if they participant more in a company's CSR activities.

Discussion, Limitations, and Future Research

This study contributes to the research by explaining entrepreneurs' environmental perspective related to PEB by establishing the TPB to predict entrepreneur's intention behavior relevance of environmental issues. Ajzen (1991) theorized that intentions to perform actual behavior can be predicted with attitudes toward behavior, subjective norms and perceived behavior control. Within this study, the attitude (EE and EC) and norms (CSR) of the TPB model were developed to predict an entrepreneurial inclination to ward pro-environmental behavior in SMEs. The study demonstrated that the entrepreneurial intention to act pro-environmentally can be predicted by an environmental attitude and norms. An entrepreneur's attitude toward environmental concerns, education and the perception of CSR is associated with the intention to pro-environmental behavior. The strongest relationship in predicting entrepreneurial intention to pro-environmental behavior is the attitude toward environmental concerns. The positive attitude toward environmental (EE and EC) related to company norms

(CSR). Norms of the company influence to PEB intention in Thai's SME. TPB has been explained the effect of attitude of environmental issues to intention to perform environmentally behavior. To strengthen the PEB intention of the SME entrepreneur, the integrating of the factors of environmental attitude (EE and EC) and norms (CSR) should be integrated into the model. This is supported by Du, Bhattacharya and Sen (2010) who examined if CSR mechanisms encouraged the stakeholders of the company to act supportively. Their study recommends companies to promote CSR activities to all stakeholders to encourage support for their behavior. The insignificance of the path estimate between EE and PEB after CSR is included as a mediating construct in the model, suggested a full mediation for CSR. However, the path estimate between EE and PEB is still significant while CSR, the mediator, also has a significant relationship with PEB. This means that there is a significant direct relationship between EC toward PEB, but that there is also a significant indirect effect through CSR. A part of this study is similar to the finding of Stern (2000) which developed a conceptual framework for the theory of environmentally significant individual behavior. Based on TPB model, the study also reports the significant influence of attitude (EC and EE) to the PEB (intention). In detail, Thai SME's management EE and EC were found to affect CSR. The findings also indicated that CSR was significantly related to PEB. Moreover, the study focused on CSR as a mediating factor in the relationship between EE toward PEB, and EC toward PEB. The results also found that EE influences PEB indirectly via CSR. Finally, Ajzen's model of TPB used in this study can be suggested to predict entrepreneurial intention toward environmental behavior.

In short, this study suggested that a developed CSR perception defines the SME's PEB. The outcomes of this study indicate that CSR encourages firms to employ practices such as social responsibilities and environmental management. This suggestion is supported by the previous results (Chapagain, 2010) which state that CSR practices that emphasize social and environmental features help to progress a company's performance. The research reported here suggests that SME owners focus on the concern for wildlife, waste, and energy in their organizational communications, and provide experience related to environmental skill, environmental participation, and environmental evaluation as key dimensions in driving the PEB of the firm via CSR. There are many methods to facilitate SMEs, such as environmental training programs for the employees in SMEs that improve environmental skills, evaluate the environmental aspects of the company; encourage the involvement of employees in environmental related activities in a SMEs operation, and set up a linkage between the SMEs and the public or organizations that provide environmental talks or seminars. The contribution of this research is not limited to academic purposes but benefits practitioners as well, especially SMEs.

This study only has a few limitations. Although CFI (0.86) is slight lower than the threshold (0.9) recommend by Hair et al (2010), other model fit indexes are still in the acceptable range which can be considered as a good model fit. It is feasible for owners and management to respond to survey questions in a manner which will be viewed favorably by others, because environmental management is perceived as a socially desirable behavior Additional, many studies also note that middle management and/or line employees may have different views regarding their environmental perceptions. In the future, research could consider seeking perceptions of various organizational members and retest the proposed model. It would be also interesting to detect perceptual discrepancies in SME's environmental management among various organization members.

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